

VEGETATION OF SOUTH AND CENTRAL GIPPSLAND

by

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ABSTRACT

Gullan, P.K., Forbes, S.J., Earl, G.E., Barley, R.H. & Walsh, N.G. Vegetation of South and Central Gippsland. *Muelleria* 6 (2):97-145 (1985). — Areas of South and Central Gippsland, Victoria, were surveyed between 1979 and 1983 using a floristics-based, quadrat-sampling technique. The data from 246 quadrat sites of these surveys plus 623 quadrat sites from surveys carried out by others between 1972 and 1981 were analysed using a computer-based, numerical sorting and classification procedure to determine the major floristic vegetation types of the area. These were then arranged hierarchically into 20 floristic *communities*, each with one or more distinct floristic *sub-communities*.

Communities defined in this paper include alpine heaths, wet mountain forests in the north and central highlands of the area, grassy woodlands, heathy woodlands and open forests of the inland and near-coastal lowlands, and salt marsh and mangrove of the coast.

INTRODUCTION

This paper presents the results of a floristic vegetation survey of Central Gippsland and part of South Gippsland. Its purpose is to define and describe the major floristic vegetation communities of the area and give an indication of their geographical and environmental ranges.

The results incorporate data from 246 quadrat sites examined between 1979 and 1983 by a team from the National Herbarium of Victoria and from 623 quadrat sites examined by others between 1972 and 1981 (see Data Collection).

THE STUDY AREA

The study area is approximately 9000 km² and includes the shires of Narracan, Waragul, Morwell, Rosedale, Mirboo, Alberton and part of South Gippsland (Fig. 1). It encompasses the catchments of the Albert and Tarra Rivers, Bruthen and Merriman Creeks and most of the Latrobe River and its tributaries (e.g. the Thomson, Tyers, Tanjil and Morwell Rivers). The highest point in the area is 1560 m at Mt St Phillack on the Baw Baw Plateau and the lowest elevation is sea-level at Corner Inlet to the south (Fig. 2). Precipitation varies from below 700 mm per annum in the east to above 1400 mm per annum on the Baw Baw Plateau, where some falls as snow (Fig. 3).



Fig. 1. Location of the Study Area in Victoria.

*National Herbarium of Victoria, Birdwood Avenue, South Yarra, Victoria, Australia 3141.

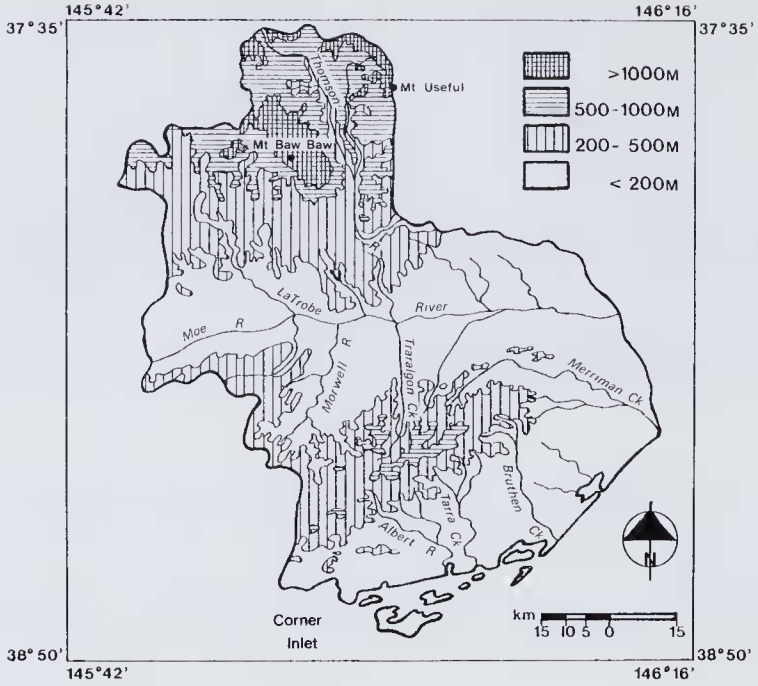


Fig. 2. Study Area showing topography and rivers.

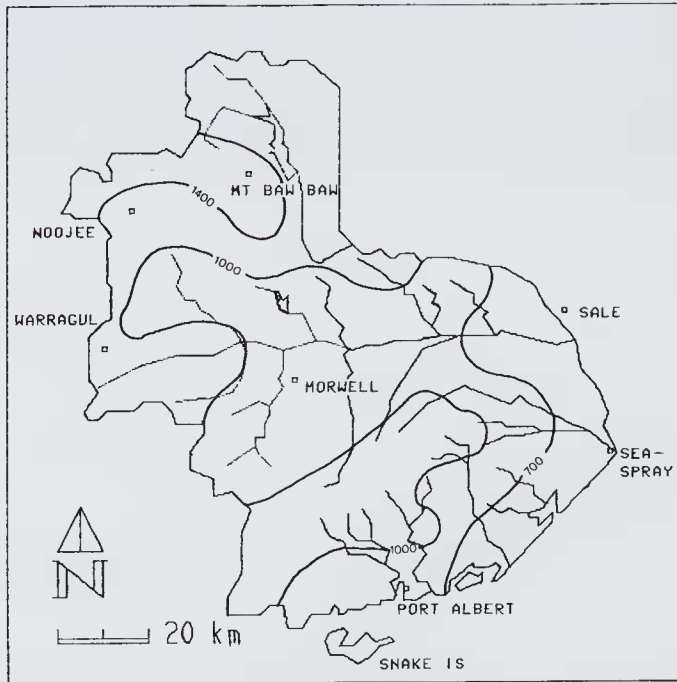


Fig. 3. Study Area showing localities and mean annual rainfall in mm.

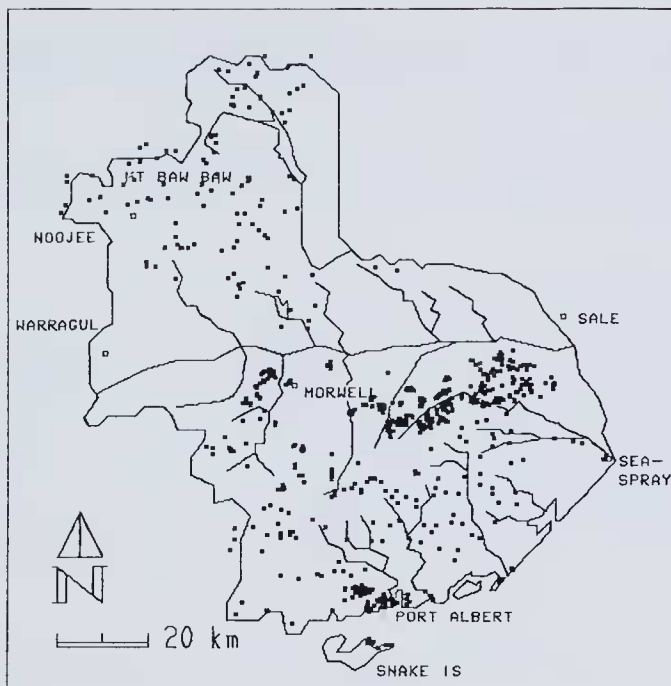


Fig. 4. Study Area showing all quadrat sites.

THE SURVEY

Method

DATA COLLECTION

Floristic and structural data were available from 901 quadrats, 869 of which were used in the analysis (32 sites from different surveys had inadequate locality information for use in sub-community descriptions). These quadrats were from the sources outlined below and were chosen to represent examples of all major stands of vegetation within the study area (Fig. 4).

246 quadrats: Field surveys by the National Herbarium survey team in 1979, 1981 and 1983, quadrat numbers beginning with 08, 09, 10, 28 and 40.

275 quadrats: Unpublished Ph.D. Thesis and field notes of G.C. Suckling, Monash University, quadrat numbers beginning with 26 (Suckling 1980, and associated raw data).

120 quadrats: Field survey by G.W. Carr working for Kinhill Planners Pty. Ltd., quadrat numbers beginning with 22 and 25 (Carr 1981, and associated raw data).

84 quadrats: Field survey of the Holy Plains National Park by G.A. Parr-Smith, Victorian National Parks Authority, quadrat numbers beginning with 23 (Parr-Smith 1978, and associated raw data).

76 quadrats: Field survey by N.H. Scarlett, Melbourne University, quadrats 27007-27082 (unpublished data collected 1973).

57 quadrats: Field survey of Gellions Run by A.R.G. McMahon, Land Conservation Council, Victoria, quadrat numbers beginning with 24 (McMahon 1981, and associated raw data).

6 quadrats: Field survey of Tarra Valley and Bulga National Parks by J.R. Busby, Monash University, quadrats 27001-27006 (unpublished data collected 1972).

5 quadrats: Field survey of Baw Baw Reference Area by D. Cheal, Victorian National Parks Authority (1982), quadrats 40009-40013.

The format and quality of data from these sources varied but all included a list of all vascular plant species from a quadrat site which was considered to be representative of the native vegetation of the area. At each quadrat site the performance of each species was visually assessed and assigned a numerical value on the Braun-Blanquet scale (see Gullan 1978).

A structural description of the vegetation at each quadrat was also made and was later standardized (by the authors of this report) to conform with the system of Specht (1970).

Each quadrat was located on a 1:100,000 scale topographic map and from this the altitude, latitude and longitude were determined.

PLANT IDENTIFICATION

Nomenclature follows that of Forbes et al. (1984).

In most cases where plants could not be identified in the field, specimens were collected and later checked against a reference collection (usually that of the National Herbarium). Where identification to species level was not possible, or beyond the capabilities of the worker, nomenclature was taken to a higher taxonomic level (e.g. *Juncus* spp., Gramineae sp.).

The following is a list of those taxa in which nomenclature qualifications need to be made as a result of difficulties with identifications or changes in classification of some plant groups subsequent to the original data collection.

Amyema pendulum, *A. miquelii*—because of the difficulties in collecting these arboreal parasites and their superficial vegetative similarity, all specimens have been recorded as *A. pendulum*, the commoner species.

Cassinia aculeata, *C. longifolia*, *C. trinerva*—may not have been correctly identified at times due to the unavailability of suitable field key (e.g. Willis 1973) at the time of sampling for some of the workers. Recent field studies suggest that *C. trinerva* is more common than the data in this report suggest.

Casuarina paludosa, *C. pusilla*—lines of demarcation between these taxonomically complex species are often unclear. Intermediate specimens have been referred to *C. paludosa*, the commonest species in eastern Victoria.

Centaurium erythraea, *C. tenuiflorum*—distinction between these species is complicated by the broad overlap in floral and vegetative characteristics. In the absence of adequate flowering material specimens have been recorded as *C. tenuiflorum*.

Chiloglottis spp.—non-flowering individuals of this genus are almost indistinguishable and in such cases the commonest species *C. gunnii* has been recorded.

Craspedia glauca, *Craspedia* sp. D—lowland individuals of this species complex were recorded as *C. glauca* whereas alpine specimens have been identified with reference to the arrangement of Costin et al. (1981).

Erigeron pappochromus, *Erigeron* spp. A,B,C—the same procedure as that used on *Craspedia* was adopted.

Eucalyptus viminalis—No distinction was made between the riparian and near-coastal ecotypes of this species (regarded by some authors as distinct species) as intergradation between forms was almost complete within the study area.

Geranium potentilloides, *G. retrorsum*, *G. solanderi*—these species are virtually indistinguishable in the vegetative state and, when no flowering material was available, specimens were referred to the commonest species, *G. potentilloides*.

Juncus spp. Section *Genuini*—due to the unavailability of diagnosis for all species within this taxonomically difficult group (particularly for some of the earlier workers) specimens may not have been identified beyond *Juncus* spp.

Luzula campestris sp. agg.—most specimens of *Luzula* were lumped into the species aggregate, however 18 specimens were identified with reference to Edgar (1975).

Poa australis sp. agg.—J.W. Vickery's taxonomic study of *Poa* was published in 1970. This revision has gained varied acceptance amongst field botanists and few of the species in this aggregate have been identified further than *P. australis*. However, some of the more recent data from the high country and the lowlands near Driffield incorporates identification to species level.

Rubus fruticosus sp. agg.—about 15% of the specimens have been identified with reference to Amor and Miles (1974). The remainder have been retained as *R. fruticosus* sp. agg., either because of the unavailability of suitable material or because of individual contributor's non-acceptance of this revision.

Senecio spp. (*Erechtites* group)—when young or infertile, members of this group are often indistinguishable. In such cases specimens have been labelled *Senecio* spp.

DATA STORAGE AND ANALYSIS

Information from each quadrat site (floristics, locality, altitude and sampling date) was stored on magnetic disk. Analyses were in the form of a computer-based, numerical classification procedure coupled with a hand-sorting procedure of the type outlined in Gullan (1978). The final result of this analysis is a two-way table which holds all of the raw data in a sorted form. However, because most species occur in less than 10% of the quadrats and add little to the overall vegetation description, the two-way tables presented in this paper do not contain all the species recorded in each quadrat. For a full explanation of the two-way tables see Gullan *et al.* (1981).

Terminology

The terminology associated with the vegetation classification follows that of Gullan *et al.* (1981). The terms used are discussed briefly here.

SUB-COMMUNITY

A sub-community is a group of quadrats which have a similar floristic composition.

COMMUNITY

A community is a collection of one or more sub-communities which have floristic and environmental affinities. The community may represent a floristic continuum along which arbitrary divisions have been made to form sub-communities. It may represent a collection of sub-communities which are considered to be different temporal phases of the same vegetation or a single vegetation under different disturbance regimes (e.g. fire, grazing, clearing).

CHARACTER SPECIES

A character species is one which occurs frequently and consistently in the quadrats of a sub-community and is useful as an indicator of that sub-community. For a full discussion of this term and its numerical calculation see Gullan *et al.* (1981).

COMMUNITY NAMES

These are familiar and descriptive names (common names) applied to the communities and take into account common, although often imprecise, terminology (e.g. Wet Sclerophyll Forest). The naming system used here is described more fully in Gullan *et al.* (1981). Where appropriate the names of communities in this paper follow those of Gullan *et al.* (1981) and Forbes *et al.* (1982).

Limitations and Qualifications

FLORISTICS

As each quadrat was sampled only once, some annual ephemeral species may have been missed at quadrat sites.

DISTRIBUTION OF SUB-COMMUNITIES

The distribution maps provided with the sub-community descriptions show sites where

a sub-community has been positively recorded. They are not exhaustive maps of each sub-community.

WEEDS

The mean weed composition of each sub-community has been determined in this paper. This is an indicator of weed invasion into native plant communities. It should not be interpreted as an indicator of the abundance of weeds in the entire study area.

RESULTS

The results of the survey and its analysis are presented in three different ways in order to provide easy access to any piece of information relevant to the aims of this paper.

Two-way Tables

The two-way tables (Tables 1-9) contain a succinct description of the floristic composition of the vegetation and are the most important source of information on floristic variation within and between different kinds of vegetation (see Gullan *et al.*, 1981).

Community Descriptions

Twenty communities have been described for the South and Central Gippsland study area. These represent the major extant vegetation types of the region. However the descriptions will not always reflect the floristic composition and natural distribution of these communities prior to European settlement. Since settlement large areas of native vegetation have been cleared for pasture and pine plantations (*Pinus radiata*).

Undoubtedly the Grassy Woodland community has suffered most from this disturbance. This is reflected by the abundance of introduced species in the community and by the fragmentation of its remnant stands. It is probable that some sub-communities of Grassy Woodland have been completely destroyed by extensive land clearance immediately north and south of the Princes Highway. One of these sub-communities may have been dominated by *Eucalyptus tereticornis* (Forest Red Gum), a species once widespread in the study area but now restricted to a few sites north of the Strzelecki Ranges on alienated land.

A brief description of each of the major communities in South and Central Gippsland (SCG) is given below.

SCG COMMUNITY 1: Alpine Wet Heath (Fig. 5a; 5 sites).

An open to closed-heath community confined to depressions and drainage basins of the Baw Baw Plateau. The vegetation varies in structure and floristic composition depending on the water content of the soil.

SCG COMMUNITY 2: Alpine Heath (Fig. 5b; 4 sites).

An open to closed-heath community found on exposed hillsides between the depressions supporting Alpine Wet Heath and the hills supporting Snow Gum Woodland on the Baw Baw Plateau. The species dominating this community are often those that are common in the understorey of Snow Gum Woodland (Walsh *et al.*, 1984).

SCG COMMUNITY 3: Snow Gum Woodland (Fig. 5c; 7 sites).

A woodland dominated by the small, often mallee-form tree, *Eucalyptus pauciflora*. The community is restricted to well-drained soils on hills and ridges of the Baw Baw Plateau and surrounds. The understorey is different from that of representatives of this community in other parts of Victoria, in the abundance of the shrubs *Pultenaea muelleri* and *Wittsteinia vacciniacea*, the latter being endemic to the plateau and a few nearby ridges and peaks.

SCG COMMUNITY 4: Subalpine Riparian Scrub (Fig. 5d; 6 sites).

A closed-scrub community of moist, protected gullies above 900 m in the region of the Baw Baw Plateau. *Nothofagus cunninghamii* (growing as a large dense shrub) and *Leptospermum grandifolium* usually dominate an understorey of shrubs sedges and herbs.

SCG COMMUNITY 5: Montane Sclerophyll Woodland (Fig. 5e; 2 sub-communities; 16 sites).

A floristically-rich, sclerophyllous woodland of exposed, stoney slopes and ridges, usually above 700 m. The trees are often stunted *E. radiata*, *E. dives* and *E. cypellocarpa*. Understorey species include many Damp Sclerophyll Forest plants as well as species indicative of dry ridges.

SCG COMMUNITY 6: Cool Temperate Rainforest (Fig. 5f; 2 sub-communities; 30 sites).

A closed-forest dominated by *Nothofagus cunninghamii* (as a tree to 25 m; cf. SCG Community 4) growing in deep, protected gullies particularly within the high-rainfall parts of the Strzelecki Ranges. The understorey is dominated by a range of tree-ferns which grow with a range of smaller ground and epiphytic ferns.

SCG COMMUNITY 7: Wet Sclerophyll Forest (Fig. 5g; 58 sites).

A tall open-forest, usually dominated by *E. regnans* and growing on deep loamy soils of wetter mountain ranges at altitudes of 100 to 1000 m. Other major tree species of this forest include *E. obliqua*, *E. cypellocarpa* and *E. radiata* on more exposed sites, and *E. viminalis* on riparian sites.

SCG COMMUNITY 8: Dry Sclerophyll Forest (Fig. 5h; 2 sub-communities; 19 sites).

An open-forest on loam to sandy-loam soils at altitudes of 80 to 200 m in the vicinity of the Holey Plains. The major tree species are *E. globoidea* and *E. consideniana* which dominate a very species-poor understorey supporting dense stands of *Peridium esculentum*, *Gahnia radula* and *Leptospermum phylloides*. The community has obviously suffered severe disturbance in the past and supports fewer species than it would have in pre-European times.

SCG COMMUNITY 9: Damp Sclerophyll Forest (Fig. 6a; 9 sub-communities; 226 sites).

An open-forest to tall open-forest of loam soils at altitudes usually between 50 and 700 m. This is the most variable community in the study area both floristically and structurally. Since the destruction of most of the Wet Sclerophyll Forest, either through clearing by early settlers or burning in the 1939 fires, Damp Sclerophyll Forest has become the most heavily utilized community for timber production and allied forest products (e.g. woodchips).

SCG COMMUNITY 10: *Leptospermum myrsinoides* Heathland (Fig. 6b; 3 sub-communities; 202 sites).

A woodland with a heathland understorey on sandy soils below 300 m. In more western areas (e.g. Mornington Peninsula, Lower Glenelg National Park) this community often exists without, or with only a sparse, tree cover. In the study area, however, the tree layer is usually well developed.

The understorey is always dominated by the dense shrub *Leptospermum myrsinoides* but the tree layer varies. In the south, *E. viminalis* (var. *pryoriana*, a stunted sometimes mallee-form ecotype) is the major tree species, in the central region (e.g. Mullungdung and Boodyarn Forests) *E. consideniana* and *E. radiata* are the commonest species and in the north-east (Holey Plains), *E. nitida* is the commonest species. In all regions *Banksia serrata* is abundant.

SCG COMMUNITY 12: Grassy Woodland (Fig. 6c; 4 sub-communities; 110 sites).

An open-forest to woodland community found on flat to gently undulating, clay-loam soils at altitudes of 20 to 220 m. The main tree species, *E. radiata* and *E. viminalis*, dominate an understorey made up largely of grasses and other monocotyledons, and herbaceous dicotyledons. Shrubs are locally abundant but not usually dominant in the understorey.

Because of relatively flat terrain on which this community is found, small depressions may become seasonally waterlogged. In these depressions *E. ovata* is usually the dominant tree species and *Melaleuca ericifolia* Scrub can develop beneath it.

Grassy Woodland has been heavily utilized for grazing throughout its range in the study area. As a consequence it is the most fragmented and weedy of the communities in the region.

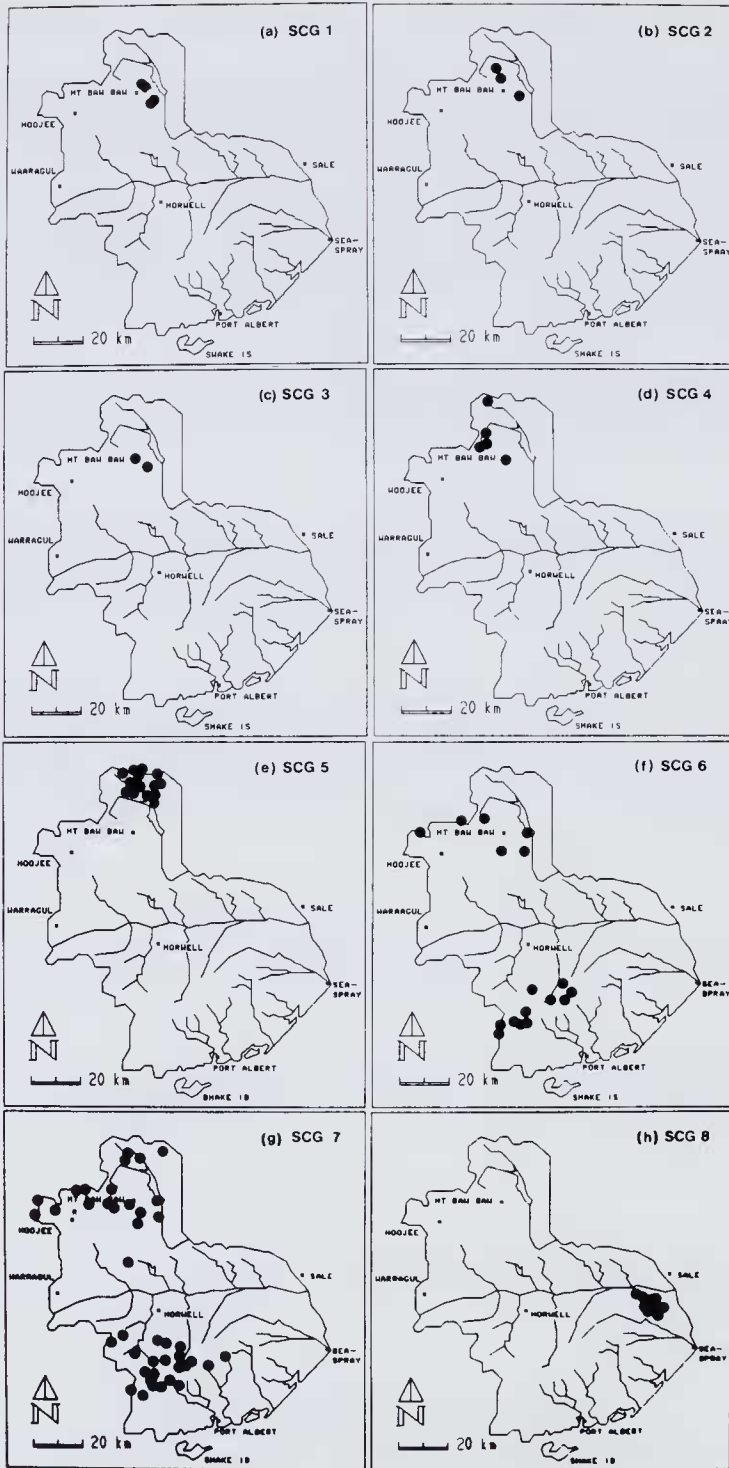


Fig. 5. Distribution maps for communities 1-8.

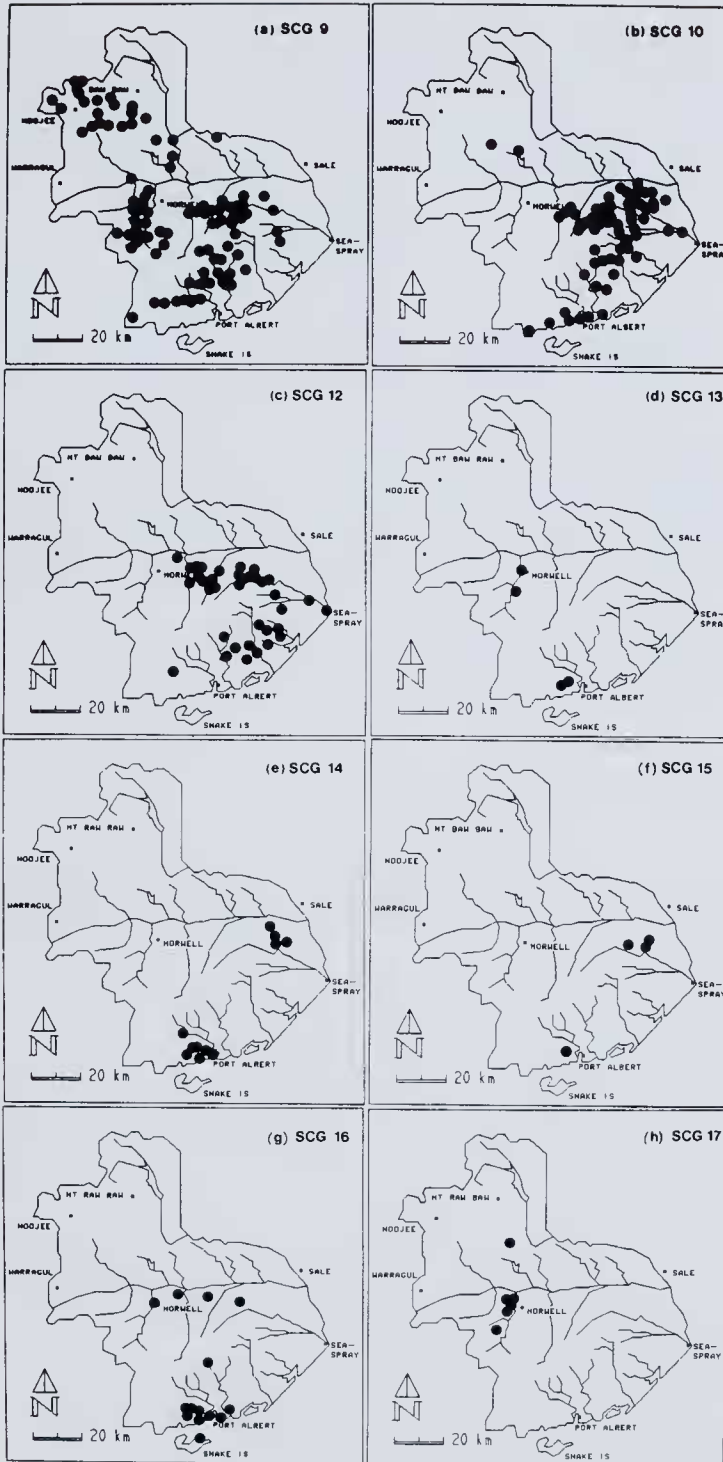


Fig. 6. Distribution maps for communities 9, 10 and 12-17.

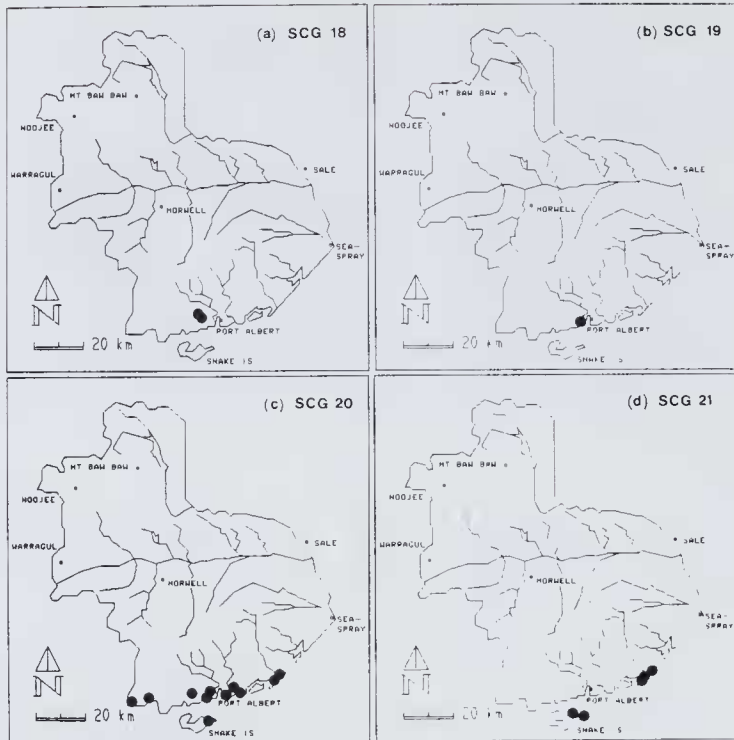


Fig. 7. Distribution maps for communities 18-21.

SCG COMMUNITY 13: Freshwater Marsh (Fig. 6d; 2 sub-communities; 5 sites).

Aquatic vegetation in pools of standing water on lowland farming areas. Plants include those that are floating on the water surface (e.g. *Lemna minor*) and those that are rooted in the substrate (e.g. *Potamogeton* spp., *Triglochin procera*).

SCG COMMUNITY 14: Coastal Heathland (Fig. 6e; 2 sub-communities; 20 sites).

A closed-heath to open-woodland on poorly drained, sandy soils, principally of near-coastal regions. The dominant species of the community are *Melaleuca squarrosa*, *Leptospermum myrsinoides*, and *Xanthorrhoea resinosa*, which grow in conjunction with a variety of sedges and small sclerophyllous shrubs.

SCG COMMUNITY 15: Sedge Swampland (Fig. 6f; 7 sites).

An open-sedgeland community usually occurring on waterlogged soils near the wetter parts of Coastal Heathland. In most cases the vegetation is dominated by one or two species of sedge, often to the exclusion of all other species (e.g. *Lepidosperma longitudinale*).

SCG COMMUNITY 16: *Melaleuca ericifolia* Scrub (Fig. 6g; 7 sub-communities; 32 sites).

A closed-scrub community dominated by *Melaleuca ericifolia* but with a varied understorey. Thickets of *M. ericifolia* are found on wet heavy soils in lowland areas in four distinctly different environments.

- (i) Sand-clay soils in association with Coastal Heathland.
- (ii) Clay-loam soils on highly disturbed, often pastoral sites associated with Riparian Scrub or Grassy Woodland.
- (iii) Poorly-drained sands in disturbed coastal regions associated with Coastal Banksia Woodland.
- (iv) Poorly-drained coastal mudflats inland from and associated with Salt Marsh.

SCG COMMUNITY 17: Riparian Scrub (Fig. 6h; 2 sub-communities; 12 sites).

A closed-scrub to open-woodland of lowland, shallow and slow-running watercourses and alluvial soils. The sites on which this community is found are generally very disturbed and support large populations of introduced, opportunistic species. Chief amongst the native species are *E. ovata* (an occasional stunted tree), *Melaleuca squarrosa* and *Leptospermum* spp., which dominate the shrub layer, and a range of sedges, grasses, herbs and ferns, each of which may dominate the ground layer in localised patches.

SCG COMMUNITY 18: Unclassified (Fig. 7a; 3 sites).

A disturbed, species-poor vegetation dominated by *M. squarrosa* and possibly a depauperate version of Coastal Heathland.

SCG COMMUNITY 19: Mangrove (Fig. 7b; 2 sites).

A closed-heath to closed-scrub community consisting entirely of one species, *Avicennia marina*, and forming a broad band between the Salt Marsh and the sea along the coast of Corner Inlet and the offshore islands.

SCG COMMUNITY 20: Salt Marsh (Fig. 7c; 21 sites).

An open-heath to closed-herbfield community of salt-tolerant, often succulent species growing on the intertidal mudflats of Corner Inlet and the offshore islands. The community is markedly zoned from seaward to landward. The outermost band is usually made up entirely of *Sarcocornia quinqueflora*. Landward from this is a heathland which is dominated by *Sclerostegia arbuscula* growing over a range of herbs. Further inland is a closed-herbfield with a mixture of low herbs and semi-shrubs.

SCG COMMUNITY 21: Coastal *Banksia* Woodland (Fig. 7d; 2 sub-communities; 9 sites).

A low open-forest to woodland found on well-drained calcareous sands of coastal regions. The large shrub *Banksia integrifolia* dominates an understorey of smaller sclerophyllous shrubs, herbs and sedges.

Sub-community Summary Sheets

The following three sets of information have been amalgamated to produce a summary sheet for each of the 46 sub-communities. These summary sheets constitute the primary means of describing vegetation in this paper.

SUB-COMMUNITY DISTRIBUTION MAPS: the distribution of each sub-community throughout the study area is shown by means of a schematic map of the study area on which is marked the location of its constituent quadrats.

CHARACTER SPECIES TABLES: These tables summarise information from the two-way tables and present it in a different format. The tables contain the character species of each sub-community, listed in order of their frequency of occurrence, and the frequency and mean cover/abundance of each species. In contrast to the two-way tables, in which the species are arranged to demonstrate the interrelationships between sub-communities, the character species tables have the species arranged to show their relative importance within an individual sub-community.

SUB-COMMUNITY DESCRIPTIONS AND ANNOTATIONS: A simple description has been made for each sub-community which includes briefly summarised information on its distribution, environment, altitude, structure, floristic richness and weed composition.

Table 1. Two-way table of Communities 1-5.

SUB-COMMUNITY	1.1	2.1	3.1	4.1	5.1	5.2
QUADRATS	44444	44444	44444	00000	00000	00000
	00000	00000	00000	99999	99999	99999
	22222	22222	20000	00000	00000	00000
SPECIES	00000	00000	11114	10024	53353	43155
	45678	02319	01234	95813	23493	46059
						06652
						74
<i>Astelia alpina</i>	11+11					
<i>Empodisma minus</i>	12121					
<i>Epacris paludosa</i>	1212+	+		1		
<i>Olearia algida</i>	1+1+1	+1				
<i>Richea continentis</i>	+2411			+ 1		
<i>Sphagnum spp.</i>	42+22					
<i>Baeckea utilis</i>	++++					
<i>Blechnum penna-marina</i>	++++		1	1		
<i>Gentianella diemensis</i>	1+++					
<i>Craspedia sp 'D'</i>	1+++					
<i>Euphrasia gibbsiae</i>	11 +1					
<i>Thelymitra venosa</i>	+1 +1					
<i>Carpha nivicola</i>	11 1					
<i>Lycopodium fastigiatum</i>	++ +	1 +	1			
<i>Isolepis aucklandica</i>	1++					
<i>Callistemon sieberi</i>	+1 1					
<i>Ranunculus collinus</i>	1++	21		+		
<i>Poa hiemata</i>	++1	111				
* <i>Cerastium fontanum</i>		++1+	+			
<i>Senecio gunnii</i>	+	+++1	+	+++		
<i>Carex breviculmis</i>		+ 11				
<i>Orites lancifolia</i>	+	+ +1	2			
* <i>Poa pratensis</i>		+21				
* <i>Rumex acetosella</i>		+ ++		+		
<i>Hydrocotyle algida</i>	+1+	1+123	11			
<i>Asperula gunnii</i>	++ +	+ +	1+	1		
<i>Pultenaea muelleri</i>	+	2	211312432			4
<i>Eucalyptus pauciflora</i>			4534434			+
<i>Gonocarpus montanus</i>			+11 2+	+		
<i>Poa labillardieri</i>			4234			
<i>Uncinia compacta</i>			2 2+			
<i>Gahnia sieberiana</i>				+++ +		2
<i>Oxalis magellanica</i>	+			11+1		
<i>Carex appressa</i>	+1 1 1			+422	+	
<i>Epilobium gunnianum</i>	1++			12 +	++	
<i>Leptospermum grandifolium</i>	++ +		1	222+1	2	+
<i>Leucopogon gelidus</i>			+1 1	++ 1+		
<i>Wittsteinia vacciniacea</i>	++		11 1	1 12+		
<i>Coprosma nitida</i>			+ 2 2 1	++1 1		
<i>Tasmannia xerophila</i>	+	1	+2 32+	1 1		
<i>Trochocarpa clarkei</i>			+ +1 21+	1 +		
<i>Leucopogon maccraei</i>			+ 2 + 2	31215		
<i>Nothofagus cunninghamii</i>			2 23	2+222		

Olearia phlogopappa		1	1+2122221	11+122	11 1	+ +
Viola hederacea		1	+132123+2+		++1 ++1+1	+ + +
Dreomyrrhis eriopoda		1+11+	11+121		+ + + +	
*Hypochoeris radicata		1+11		2+2+	++ 1 ++ 1++	
Polystichum proliferum			+1 +1 +	11+111	22112	11+
Senecio linearifolius			++ ++	11 ++	+1+1+1	1 +
Coprosma hirtella				21++ 111	1 + 1	+ +
Hydrocotyle hirta				+ +21 ++	+1+ 1 +	
Ranunculus plebeius				111+ ++1	++1	
Cotula filicula		+		12 11 +	++	
Acacia dealbata				+ +11121	+21111+	+ +
Luzula campestris				+111 +	++ 1++ + + +	
Stellaria pungens				1 1	11 +11 1 +	
Gnaphalium japonicum		+		1++	1 ++ + + +	
Lagenifera stipitata		1		+11 +	+1+ 11+1+	
Senecio quadridentatus				1 1	++ +1++ +	
Geranium potentilloides		1 1		+111++	+111++1	
Acaena anserinifolia		+ +		1111+1	++1112	11+ 1+
Polyscias sambucifolius		1		+21+211+	1+1+1++	
Stylidium graminifolium	++	+ 1	+4	3112+ +	11+ 1 1+2+112 112	
Poa australis sp. agg.				2131	4111232112212211212	
Dianella tasmanica			2	1121++111	1+1111+221 + 1+2	
Cassinia aculeata				111	+222+1312+2+ 1	
Eucalyptus radiata				3211121211 1	12 12	
Pteridium esculentum				+	1+11+1111+++ 1+1	
Acacia mucronata				31+3	2221222122+ 1	
Daviesia ulicifolia			1	2+ 1	11122133223	
Eucalyptus cypellocarpa				22	212121 11 111	
Eucalyptus dives				1	12112223222	
Epacris impressa				2	+2242124213	
Tetrarrhena juncea				2 2	2322+12 1	
Lomandra longifolia			1	1	+5111+11 12	
Pultenaea juniperina				2+ 2	1+12 2 1	
Rubus parvifolius				12+	++1+	
Clematis aristata				11++	+++ +	
Oxalis corniculata				+++	+++	
Acacia melanoxylon				11 2	+11	
Chiloglottis gunnii	+			++	+++ ++ 1	
Coprosma quadrifida					+1 +1 11+ ++	
Asperula scoparia					+1 1 ++ +	
Pomaderris aspera					21 1+1	
*Rubus fruticosus sp. agg.				++	++ +++ +	
Deyeuxia rodwayi			1	1	++1 1 1	
Eucalyptus viminalis					+3 1 +1	
Dianella revoluta					1 + ++11+2	
Tetralochea ciliata			+	+	1231122111	
Monotoca scoparia				+	+++ 22212	
Persoonia confertiflora				+	+ + ++111 +	
Cassytha melantha					+ + +++ 2	
Dillwynia retorta					13 123 2	

Blechnum nudum	+ 3 1 1 2 + 4+1 +	+ 1 + +2 113 +	+ 1 1 2 2 22 1	+ 22+
Correa laeveciana	3 1 + 121 243 + 123 2222	1 112 2	222 1	22+
*Rubus fruticosus sp. agg.	+ 1 1 + +1+	++ + +1+1 2 + + + +	1 31 1	11
Lepidosperma elatius	1 1 1 + +	1 1 ++ 11 + ++ 211 1 1112	22+	22 1 +
Pomaderris aspera	2 511 1	+2 + 1 311112 12 3 12214+1 121 1244212233 + 25 1	+	25 1 +
Pteridium esculentum	+ + 1+ 1 1 1 + + +	111+1+11 + ++ 1 111+1+1+1+1+1+1+ 1 + 1 1 11		1 + 1 1 11
Prostanthera lasianthos	+ + 1+ 1 1 1 2 1 + + +1 211 + 2	+22++ 12 1+1 + 111 4 + 1 2	11+	11+
Viola hederacea	+ + 1+ 1 + 1 1 + + 1	1 + 1 11+1+1+1111 11 +11 +2++1 + 1211+ +	111111	111111
Polyscias sambucifolius	1 1 +22+ 1	+ + 1 11+1 1 + 1 + + 1	2	+ +
Hydrocotyle hirta	+ + +1+1+1+ + + + + +1+	+++ 11+1+111 +11+ + +1+111+2 1 + 11		1 + 11
Olearia phlogopappa	+ + 1 1 2122 + + + 1	1 1+11 +2+++ 3 22 1	311 111 1 +	112121
Cassinia aculeata	++ 1+ 1 12 + + + + 1	+11+111 1 + + 1 12 +1+	+2 1 121111 11221	11221
Acaena anserinifolia	+ + 1+ 1 + 1 + + +	+1+ + 1+ + + + + 1+ 11	+++ 1 + + 1+ 1+ 1+ 1+ 1+	1 + 1
Senecio linearifolius	+ 1 12 + + 2 + + 1	111 11 + + 1	2 1 12 + + 112 122+13+ + + + 2 11	
Dianella tasmanica	+ 1 1+ 1 + + 1 + + 1	1 1 1 +	+	1 + + +
Genanium potentilloides	1 1 1 + + + + +	11 + + 1 + + + + + 11 + 11 + 2 + + + + + 11 + 11 11 12 + + 1 + 1 + 11		1 + 1 + 1
*Hypochoeris radicata	+ + + 1 +	+++ 2 + 1 +	++ +	11 1 + + + 1 +
Ranunculus plebeius	1 + + + + +	+ + + +	+ + + + 1 + + + 1 +	1 + +
Luzula campestris	1 1 + + + +	1 + + + +	+ + + 1 +	+ + +
Coprosma hartella	+ + + +	1		+ + + 1
Cotula filicula	+ + + +			+ + + 1
Lagenifera stipitata	+ + + +			+ 1 + + +
Poa australis sp. agg.	1 1 2 + 2 2 + 1 + +	1 + + 4	1 + + 1 + 2	1 + + 2
Tasmannia lanceolata	+ 2 3 + + +	1 2 + + + 1 221 + 3 + + + + 1	1	1 +
Bedfordia arborescens	+ + +	+ 1 + 1 1 + + + +	111 + + +	+
Oxalis corniculata	+ + +	1 3 1 1 21 +2 1	+ 1 + + + + + + + 1	+ 1 + +
Gnaphalium japonicum	+ + + +	1 1 + 1 1 1 3 1	221 12 1 1	1 + 1
Eucalyptus obliqua	+ + + +		2 +	
Eucalyptus cypellocarpa	3 + + +			
Blechnum cartilagineum	+ + + +	1 + + + 1 + + + 1 + 1 + 2		++ +
Prunella vulgaris	+ + + +	1 1 + + + 22 1 111 1	1 1 + 1	+
Goodenia ovata	1 1 + + +	+ 2 1 + + + 1121 1	1 1 + 1	+
Pimelea axiflora	+ + + +	1 1 + + + 1 + + + 1 + + + 1 +		
Gonocarpus tetracoides	1 1 + + +	1 1 + + + 1 + + + 1 + + + 1 +		
Helichrysum dendroideum	+ + + +			
Microlaena stipoides	+ + + +			
*Rubus vestitus				
Lepidosperma laterale				
Eucalyptus viminalis				
*Hypericum androsaemum				
Acacia obliquinervis				
Eucalyptus delegatensis				
Eucalyptus rubida				
Eucalyptus radiata				
Eucalyptus nitens				

Table 7. Two-way table of Community 12.

SUB-COMMUNITY	12.1	12.2	12.3	12.4
QUADRATS				
SPECIES				
<i>Dichelachne micrantha</i>	++			
<i>Eucalyptus muelleriana</i>	+12122332123+			
<i>Lagenifera gracilis</i>	1+1 ++ + + 1 +			
<i>Gnaphalium japonicum</i>	+ + ++ 1+1 111111			
<i>Tricoryne elatior</i>	+ 1+ +++ + + +++			
<i>Astrolooma humifusum</i>	+ 1 1+ ++ + +11111 1 111			
<i>Xanthorrhoea minor</i>	+ + 12 1+ 1 +1+ 111111			
<i>Pimelea humilis</i>	1111+ 1+ 1 + +111 1 1 1111			
<i>Bossiaea prostrata</i>	1+ +++++ 1 1 1 1			
<i>Acrotiche serrulata</i>	+ ++ + + + 1			
<i>Kunzea ericoides</i>	1 1 343 +	111 3 3 1331	1 3	333
<i>Lowandra longifolia</i>	1 3222 1++ 1+31 31 1 1 1	11 13113	111	
<i>Microlaena stipoides</i>	1 1+++ 221 +3+ 1+11	1 111 1 11 1 11	331 1 11 33 131333	1 11 1
<i>Lowandra filiformis</i>	2122211+++ 1+ 1 12	111111 1 11 133	11 1 1+11 11	111111
<i>Poranthera microphylla</i>	++ 1+1+ + + ++ +++1	111111112 1 1111	11111	
<i>Leptospermum juniperinum</i>	1++ 1+	13 1111 11 1311 111 1 3 +		333 1
<i>Cahnia radula</i>	331+12 1 14 3+11 3	11 1 3311 31 31131 3	1 1 1	33 33 13 3 333 11
<i>Viola hederacea</i>	+ + + + 1+ ++ 1+ ++ 11	11 1 1 1	1133 1111	11 111 1 11 3 1

Acacia longifolia		1		1			2+32+			
Acacia verticillata			+		2 3		1+32+	2 2	+	2++
Hydrocotyle sibthorpioides				+		+			++	
Baumea juncea									23	
Mentha diemenica						+			++	
Melaleuca ericifolia	+ 1		3+	+	553355	5544555555	5525+	55 343	242+	
Centella cordifolia								2++12++22121	++++	
*Hypochoeris radicata				+	+	11	++ + +	+ + + 1++	+++	
Microlaena stipoides					+			2 + 221	1221	
Gonocarpus tetragynus			+					+1211	+112	
Casuarina paludosa								444	+ 2	
Leptocarpus brownii	2				2			12 1 3 2		
Lobelia alata		+		1	1			+ 1811+111		
Gahnia trifida			23 +					21 212+ 2 232		
Hemarthria uncinata								11+ 2	++	
Goodenia humilis					2			+ 2 23222	+	
Baumea acuta								2 314212		
Schoenus tesquorum								3 4452		
Lepidosperma longitudinale					22			5 43 1		
Gonocarpus micranthus					1			+ 111 1		
Melaleuca squarrosa					33	+		+434		
Selaginella uliginosa								+1 1211		
Eucalyptus viminalis			1 2	2 3	3			+22	+	
Empodisma minus								1222		
Epacris impressa								122	+	
Epacris microphylla								2 +		
Schoenus brevifolius								32		
Lindsaea linearis								12	++	
Lepidosperma filiforme								+	12	
Bossiaea prostrata								12	+++1	
Eucalyptus ovata								+	3232	
Stipa rudis								2	2143	
Senecio glomeratus			+				+		+++	
Acacia stricta				+1					++++	
Gahnia radula									3411	
Deyeuxia quadriseta							+	+	++ +	
Schoenus apogon									++ 1	
Danthonia laevis									+22	
Drosera peltata								+	+++	

ALPINE WET HEATH : SUB-COMMUNITY SCG 1.1

CHARACTER SPECIES	X/FREQ	C/A	CHARACTER SPECIES	X/FREQ	C/A	CHARACTER SPECIES	X/FREQ	C/A
<i>Astelia alpina</i>	100	1	<i>Gentianaella diemensis</i>	80	+	<i>Lycopodium fastigiatum</i>	60	+
<i>Empodisma minus</i>	100	1	<i>Craspedia</i> sp. 'D'	80	+	<i>Issolepis aucklandica</i>	60	+
<i>Epacris paludosa</i>	100	1	<i>Euphrasia gibbsiae</i>	80	1	<i>Callistemon sieberi</i>	60	1
<i>Olearia algida</i>	100	1	<i>Thelymitra venosa</i>	80	1	<i>Carex appressa</i>	60	1
<i>Richea continentis</i>	100	1	<i>Poa hieemata</i>	60	+	<i>Epilobium gunnianum</i>	60	+
<i>Sphagnum</i> spp.	100	2	<i>Asperula gunnii</i>	60	+	<i>Leptospermum grandifolium</i>	60	+
<i>Baeckea utilis</i>	80	+	<i>Carpha nivicola</i>	60	1	<i>Ranunculus collinus</i>	60	+
<i>Blechnum pennamarina</i>	80	+	<i>Hydrocotyle algida</i>	60	+			

NO. OF SITES: 5 STRUCTURE: Closed-heath

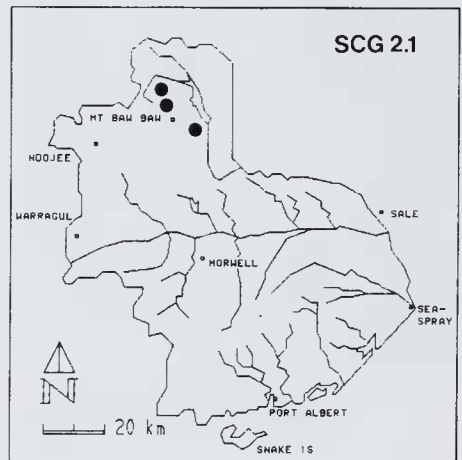
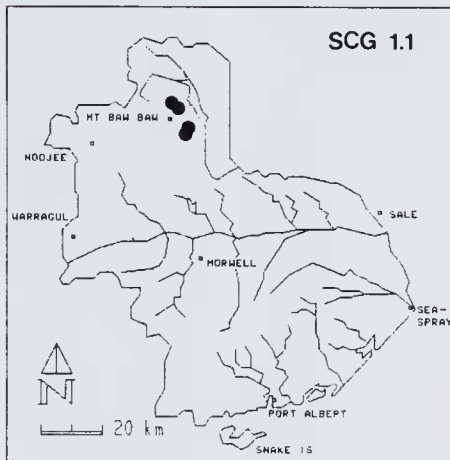
DISTRIBUTION: Scattered throughout the Baw Baw Plateau.

ENVIRONMENT: Cool and usually waterlogged depressions on snowfields of the high country. The soil is generally very organic, most of which is dead and dying *Sphagnum* spp.

ALTITUDE: Mean = 1398m, Highest = 1480m, Lowest = 1310m

MEAN FLORISTIC RICHNESS: 26 species per site MEAN WOOD COMPOSITION: 0% of species, 0% of cover

NOTES: The Baw Baw Plateau is one of the few Victorian alpine regions which are not subject to cattle grazing. As such it provides an opportunity for comparison with important alpine grazing lands such as the Bogong High Plains. If, as is often suggested, cattle severely damage the Wet Heath, then it is probable that this can be recognised in a change in floristics. From a comparison of the floristics of SCG 1.1 with that of sub-community 7A of McDougall (1982), however, it is difficult to determine whether the differences between these sub-communities can be attributed to the different environments in which they are found or their different grazing regimes.



ALPINE HEATH : SUB-COMMUNITY SCG 2.1

CHARACTER SPECIES	X/FREQ	C/A	CHARACTER SPECIES	X/FREQ	C/A	CHARACTER SPECIES	X/FREQ	C/A
* <i>Cerastium fontanum</i>	100	+	<i>Luzula australasica</i>	75	1	* <i>Acetosella vulgaris</i>	75	+
<i>Hydrocotyle algida</i>	100	1	<i>Carex breviculmis</i>	75	1	<i>Viola hederacea</i>	75	1
* <i>Hypochoeris radicata</i>	100	1	<i>Olearia phlogopappa</i>	75	1	<i>Poa hieemata</i>	75	1
<i>Oreomyrrhis eriopoda</i>	100	1	<i>Orites lancifolia</i>	75	+			
<i>Senecio gunnii</i>	100	+	* <i>Poa pratensis</i>	75	1			

NO. OF SITES: 4 STRUCTURE: Open-heath

DISTRIBUTION: Scattered throughout the Baw Baw Plateau.

ENVIRONMENT: Shallow, rocky soils on the edges of the depressions which support Alpine Wet Heath and usually adjacent to the Snow Gum Woodlands.

ALTITUDE: Mean = 1347m, Highest = 1380m, Lowest = 1320m

MEAN FLORISTIC RICHNESS: 23 species per site MEAN WOOD COMPOSITION: 19% of species, 18% of cover

NOTES: A number of the prominent species of this sub-community (*Olearia phlogopappa*, *Hydrocotyle algida*, *Pultenaea muelleri*) are also components of the Snow Gum Woodlands of the Baw Baw Plateau and are common in other subalpine regions. Conversely the common shrubs of other alpine heath regions (e.g. *Crevicelea australis*, *Kunzea muelleri*, *Hovea longifolia*) are not present in SCG 2.1. Consequently it is perhaps more reasonable to consider SCG 2.1 as a subalpine vegetation which lacks a tree canopy rather than a true alpine heath.

SNOW GUM WOODLAND : SUB-COMMUNITY SCG 3.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Eucalyptus pauciflora</i>	100	4	<i>Poa labillardieri</i>	80	3	<i>Tasmania xerophila</i>	60	2
<i>Olearia phlogopappa</i>	100	2	<i>Nothofagus cunninghamii</i>	60	2	<i>Hydrocotyle algida</i>	60	1
<i>Pultenaea muelleri</i>	100	1	<i>Polystichum proliferum</i>	60	1	<i>Stylidium graminifolium</i>	60	2
<i>Viola hederacea</i>	100	2	<i>Senecio linearifolius</i>	60	+	<i>Trochocarpa clarkei</i>	60	1
<i>Conocarpus montanus</i>	80	1	<i>Urcinia compacta</i>	60	1			

NO. OF SITES: 7 STRUCTURE: Low open-forest

DISTRIBUTION: Scattered on slopes both on and around the Baw Baw Plateau.

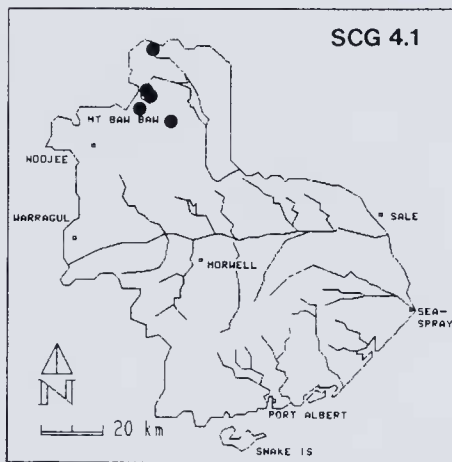
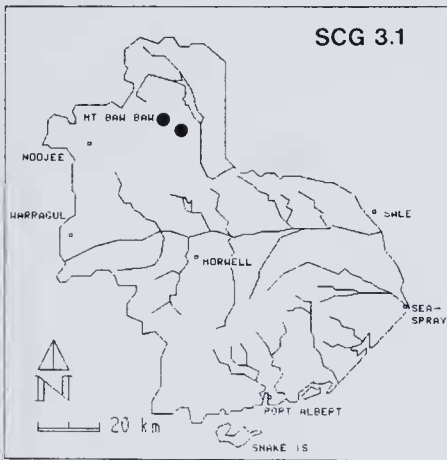
ENVIRONMENT: Exposed slopes and ridges which surround the waterlogged depressions supporting Alpine Wet Heath. Soils are shallow and rocky, temperatures are generally low, snowfalls are often heavy in winter.

ALTITUDE: Mean = 1364m, Highest = 1400m, Lowest = 1250m

MEAN FLORISTIC RICHNESS: 21 species per site

MEAN WEED COMPOSITION: 1% of species, 0% of cover

NOTES: Although there are floristic affinities between the Snow Gum Woodlands of the Baw Baw Plateau and those of other Victorian subalpine regions there are some significant and interesting differences. For example, the pea *Pultenaea muelleri* is one of the dominant understorey shrubs in SCG 3.1 but is common nowhere else in the subalps. In other Snow Gum Woodlands further east *Oxylobium alpestre* or *P. juniperina* are the dominant understorey peas. The scrambling shrub, *Wittsteinia vacciniacea*, a species which is endemic to the Plateau and nearby regions, is also common in SCG 3.1.



SUBALPINE RIPARIAN SCRUB : SUB-COMMUNITY SCG 4.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Leucopogon waccaeae</i>	100	2	<i>Geranium potentilloides</i>	71	1	<i>Carex appressa</i>	57	2
<i>Dianella tasmanica</i>	100	1	<i>Nothofagus cunninghamii</i>	71	1	<i>Oxalis magellanica</i>	57	1
<i>Olearia phlogopappa</i>	100	1	<i>Coprosma hirtella</i>	71	1	<i>Leucopogon gelidus</i>	57	1
<i>Leptospermum grandifolium</i>	86	1	<i>Hydrocotyle algida</i>	71	1	<i>Cotula filicula</i>	57	1
<i>Polystichum proliferum</i>	86	1	<i>Wittsteinia vacciniacea</i>	71	1	<i>Tasmania xerophila</i>	57	1
<i>Polyscias sambucifolius</i>	86	1	<i>Stylidium graminifolium</i>	71	1	<i>Luzula campestris</i>	57	1
<i>Poa australis</i> spp. agg.	86	1	<i>Cahnia sieberiana</i>	57	+	<i>Oreomyza eriopoda</i>	57	1
<i>Acaena anserinifolia</i>	71	1	<i>Ranunculus plebeius</i>	57	1	<i>Trochocarpa clarkei</i>	57	1
<i>Coprosma nitida</i>	71	1	<i>Acacia dealbata</i>	57	1	<i>Viola hederacea</i>	57	+

NO. OF SITES: 5 STRUCTURE: Closed-scrub

DISTRIBUTION: Scattered in high country between Baw Baw Plateau and Matlock.

ENVIRONMENT: Gullies and watercourses of the subalps.

ALTITUDE: Mean = 1078m, Highest = 1350m, Lowest = 950m

MEAN FLORISTIC RICHNESS: 43 species per site

MEAN WEED COMPOSITION: 5% of species, 5% of cover

NOTES: An unusual vegetation where *Nothofagus cunninghamii*, usually a large tree of protected montane gullies, grows as a bushy shrub in dense thickets (up to 10m high) with *Leptospermum grandifolium*. Although these two species are from distinctly different families, in this environment they are physiognomically similar, and together dominate the vegetation.

MONTANE SCLEROPHYLL WOODLAND : SUB-COMMUNITY SCG 5.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Cassinia aculeata</i>	100	1	<i>Senecio linearifolius</i>	78	1	<i>Eucalyptus dives</i>	67	1
<i>Dianella tasmanica</i>	100	1	<i>Stylidium graminifolium</i>	78	1	<i>Gnaphalium japonicum</i>	67	+
<i>Eucalyptus radiata</i>	100	1	<i>Tetrarrhena juncea</i>	78	2	* <i>Hypochoeris radicata</i>	67	+
<i>Poa australis</i> spp. agg.	100	2	<i>Clematis aristata</i>	78	+	<i>Viola hederacea</i>	67	1
<i>Pteridium esculentum</i>	100	1	<i>Lagenifera stipitata</i>	78	1	<i>Stellaria pungens</i>	67	1
<i>Acacia mucronata</i>	89	1	<i>Gonocarpus tetragynus</i>	78	1	<i>Asperula pusilla</i>	56	+
<i>Acaena anserinifolia</i>	89	1	<i>Lomandra longifolia</i>	78	1	<i>Hydrocotyle algida</i>	56	+
<i>Geranium potentilloides</i>	89	1	<i>Senecio quadridentatus</i>	78	+	<i>Pomaderris aspera</i>	56	1
<i>Polystichum proliferum</i>	89	1	<i>Polyscias sambucifolius</i>	78	+	* <i>Rubus fruticosus</i> spp. agg.	56	+
<i>Acacia dealbata</i>	89	1	<i>Pultenaea juniperina</i>	67	1	<i>Epacris impressa</i>	56	?
<i>Daviesia ulicifolia</i>	78	1	<i>Oxalis corniculata</i>	67	+	<i>Oxyria rodwayi</i>	56	1
<i>Eucalyptus cypellocarpa</i>	78	1	<i>Acacia melanoxylon</i>	67	1	<i>Eucalyptus viminalis</i>	46	1
<i>Luzula campestris</i>	78	+	<i>Chiloglottis gunnii</i>	67	+			
<i>Rubus parvifolius</i>	78	1	<i>Coprosma quadrifida</i>	67	1			

NO. OF SITES: 6 STRUCTURE: Open-forest to Low open-forest

DISTRIBUTION: Mountain slopes north of the Baw Baw Plateau.

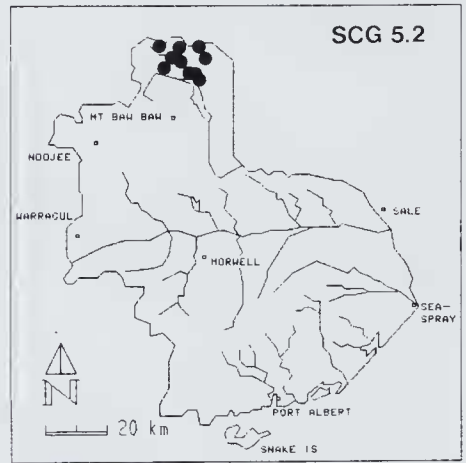
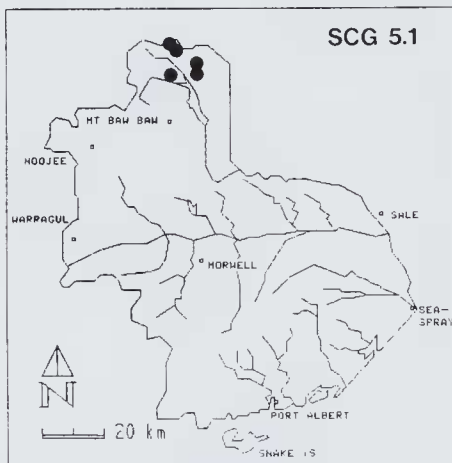
ENVIRONMENT: High altitude, well-drained, often rocky soils.

ALTITUDE: Mean = 895m, Highest = 1050m, Lowest = 760m

MEAN FLORISTIC RICHNESS: 51 species per site

MEAN WEED COMPOSITION: 6% of species, 3% of cover

NOTES: SCG 5.1 and SCG 5.2 are the two most floristically rich sub-communities of the study area. SCG 5.1 occurs in slightly less exposed hillsides, and as a result supports some mesophytic species which are not characteristic of SCG 5.2 (e.g. *Polystichum proliferum*, *Acacia melanoxylon*, *Clematis aristata*).



MONTANE SCLEROPHYLL WOODLAND : SUB-COMMUNITY SCG 5.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Acacia mucronata</i>	100	1	<i>Poa australis</i> spp. agg.	100	1	<i>Persoonia confertiflora</i>	83	1
<i>Daviesia ulicifolia</i>	100	2	<i>Tetratheca ciliata</i>	100	1	<i>Dianella tasmanica</i>	67	1
<i>Dianella revoluta</i>	100	1	<i>Eucalyptus cypellocarpa</i>	83	1	<i>Cassytha melantha</i>	67	1
<i>Epacris impressa</i>	100	2	<i>Monotoca scoparia</i>	83	2	<i>Dillwynia retorta</i>	67	2
<i>Eucalyptus dives</i>	100	2	<i>Pteridium esculentum</i>	83	+			
<i>Gonocarpus tetragynus</i>	100	1	<i>Stylidium graminifolium</i>	83	1			

NO. OF SITES: 10 STRUCTURE: Open-forest to Low open-forest

DISTRIBUTION: Mountain slopes north of the Baw Baw Plateau.

ENVIRONMENT: High altitude, well-drained, often rocky soils on exposed ridges.

ALTITUDE: Mean = 808m, Highest = 1050m, Lowest = 450m

MEAN FLORISTIC RICHNESS: 54 species per site

MEAN WEED COMPOSITION: 5% of species, 3% of cover

NOTES: SCG 5.2 is, floristically, the richest sub-community in the study area and, by virtue of its wide range of flowering species, is one of the most attractive. The exposed and dry nature of the environment in which it is found means that many of the mesophytic species common in SCG 5.1 are replaced by small-leaved, sclerophyllous species in SCG 5.2 (e.g. *Monotoca scoparia*, *Dillwynia retorta*).

COOL TEMPERATE RAINFOREST : SUB-COMMUNITY SCG 6.1

CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A
<i>Asplenium bulbiferum</i>	100	+	<i>Microsorium diversifolium</i>	89	1	<i>Blechnum wattsi</i>	67	1
<i>Dicksonia antarctica</i>	100	4	<i>Polystichum proliferum</i>	78	1	<i>Hedycarya angustifolia</i>	67	1
<i>Nothofagus cunninghamii</i>	100	2	<i>Atherosperma moschatum</i>	78	1	<i>Cyathea marcescens</i>	56	+
<i>Fieldia australis</i>	89	1	<i>Australina muelleri</i>	78	+	<i>Cassinia trinerva</i>	56	+
<i>Grammitis billardieri</i>	89	+	<i>Rumohra adiantiformis</i>	78	1	<i>Cyathea cunninghamii</i>	56	+

NO. OF SITES: 09 STRUCTURE: Closed-forest

DISTRIBUTION: Central Strzelecki Ranges.

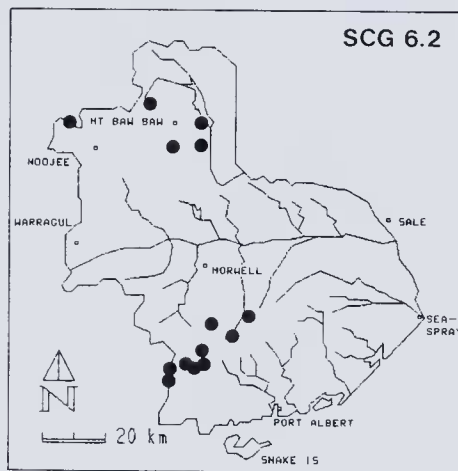
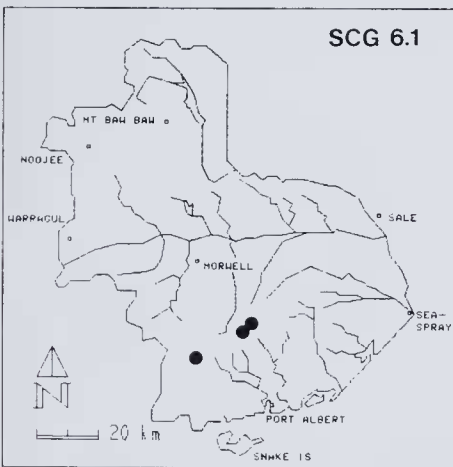
ENVIRONMENT: Wet, protected gullies at high elevations of the ranges.

ALTITUDE: Mean = 504m, Highest = 610m, Lowest = 410m

MEAN FLORISTIC RICHNESS: 19 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: This sub-community is floristically similar to *Nothofagus*-dominated cool temperate rainforest in other parts of the state, with a few notable exceptions. One is *Fieldia australis*, the only Victorian epiphytic dicotyledon, a species restricted to Gippsland and uncommon in *Nothofagus*-dominated cool temperate rainforest outside the Strzelecki Ranges. The others are *Cyathea cunninghamii* and *C. marcescens*, both tree ferns of restricted distribution and absent from the extensive cool temperate rainforest of the central highlands. The latter species is possibly a hybrid between *C. cunninghamii* and *C. australis* as it only grows in areas where the two species occur and is apparently sterile.



COOL TEMPERATE RAINFOREST : SUB-COMMUNITY SCG 6.2

CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A
<i>Dicksonia antarctica</i>	100	2	<i>Blechnum wattsi</i>	76	1	<i>Histiopteris incisa</i>	62	+
<i>Clematis aristata</i>	95	1	<i>Hedycarya angustifolia</i>	71	1	<i>Nothofagus cunninghamii</i>	62	1
<i>Cyathea australis</i>	86	2	<i>Microsorium diversifolium</i>	71	+	<i>Acacia melanoxylon</i>	57	2
<i>Polystichum proliferum</i>	81	1	<i>Grammitis billardieri</i>	67	+	<i>Asplenium bulbiferum</i>	57	1
<i>Eucalyptus regnans</i>	81	2	<i>Olearia argophylla</i>	67	1	<i>Tetrarrhena juncea</i>	52	2
<i>Acacia dealbata</i>	76	1	<i>Hydrocotyle hirta</i>	62	+	<i>Rumohra adiantiformis</i>	52	1
<i>Australina muelleri</i>	76	1	<i>Coprosma quadrifida</i>	62	1			

NO. OF SITES: 21 STRUCTURE: Closed-forest to Tall open-forest

DISTRIBUTION: Scattered through the Strzelecki Ranges and around southern parts of the Central Highlands near the Baw Baw Plateau.

ENVIRONMENT: Gullies and protected slopes in wet, mountainous areas.

ALTITUDE: Mean = 526m, Highest = 1150m, Lowest = 150m

MEAN FLORISTIC RICHNESS: 31 species per site

MEAN WEED COMPOSITION: 0% of species, 2% of cover

NOTES: This sub-community represents an ecotone between the true cool temperate rainforest of deep, protected gullies (SCG 6.1) and wet sclerophyll forest of mountain slopes (SCG 7.1). Accordingly, it occupies an environment intermediate between the two and supports species which are characteristic of both.

DRY SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 8.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Eucalyptus consideriana</i>	100	3	<i>Gahnia radula</i>	78	2	<i>Pimelea humilis</i>	67	+
<i>Lomandra filiformis</i>	100	1	<i>Monotoca scoparia</i>	67	1	<i>Gramineae spp.</i>	67	1
<i>Pteridium esculentum</i>	78	2	<i>Hibbertia acicularis</i>	67	+			

NO. OF SITES: 9 STRUCTURE: Open-forest

DISTRIBUTION: Scattered around Holey Plains.

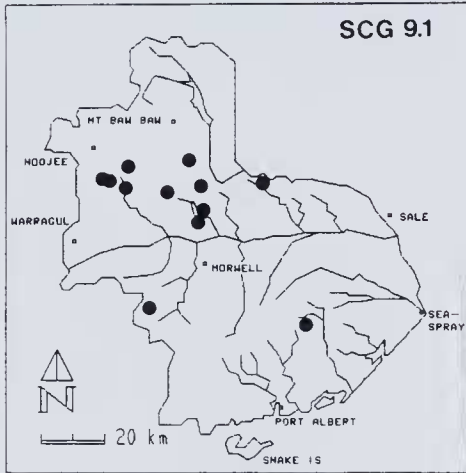
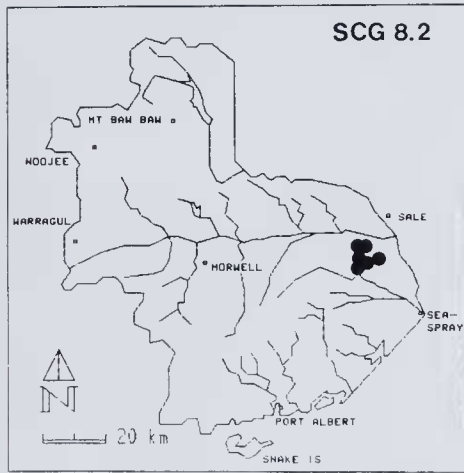
ENVIRONMENT: Sandy-loam soils on inland plains.

ALTITUDE: Mean = 126m, Highest = 190m, Lowest = 90m

MEAN FLORISTIC RICHNESS: 15 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: The low floristic richness and the dense swards of *Pteridium esculentum* and *Gahnia radula* in SCG 8.2 suggest a history of disturbance. If this is the case then it is probable that many of the species that have been lost are those which are characteristic of SCG 9.1, SCG 10.2 or SCG 10.3. These sub-communities are the only ones in the study area in which *Eucalyptus consideriana* is a character species and which support the other character species of SCG 8.2.


DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Acacia mucronata</i>	100	1	<i>Burchardia umbellata</i>	80	1	<i>Lindsaea linearis</i>	60	1
<i>Gonocarpus tetragynus</i>	93	1	<i>Drosera peltata</i>	67	+	<i>Viola hederacea</i>	60	1
<i>Pultenaea gunnii</i>	93	1	<i>Eucalyptus obliqua</i>	67	1	<i>Cassinia aculeata</i>	60	+
<i>Tetrarrhena juncea</i>	93	1	<i>Goodenia ovata</i>	67	1	<i>Amperea xiphoclada</i>	53	1
<i>Epacris impressa</i>	93	1	<i>Poa australis</i> spp. agg.	67	1	<i>Dianella revoluta</i>	53	1
<i>Gahnia radula</i>	87	2	<i>Pteridium esculentum</i>	67	1	<i>Billardiera scandens</i>	53	+
<i>Lomandra filiformis</i>	87	1	<i>Xanthorrhoea minor</i>	67	1	<i>Cassinia longifolia</i>	53	1
<i>Eucalyptus consideriana</i>	87	1	<i>*Hypochaeris radicata</i>	67	+			
<i>Leptospermum juniperinum</i>	80	1	<i>Lomandra longifolia</i>	60	+			

NO. OF SITES: 14 STRUCTURE: Open-forest

DISTRIBUTION: Scattered throughout the southern parts of the Central Highlands, with two isolated occurrences in the Strzelecki Ranges.

ENVIRONMENT: Sandy-loam soils on well-drained sites in undulating country, often on northern or north-westerly slopes.

ALTITUDE: Mean = 265m, Highest = 400m, Lowest = 140m

MEAN FLORISTIC RICHNESS: 42 species per site

MEAN WEED COMPOSITION: 3% of species, 1% of cover

NOTES: The understory of SCG 9.1 is the most sclerophyllous of all the Damp Sclerophyll Forest sub-communities in the study area. The presence of *E. consideriana* and the preponderance of small-leaved shrubs demonstrate a floristic affinity with the *Leptospermum myrsinoides* Heath sub-communities.

DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Gonocarpus tetragynus	92	+	Eucalyptus radiata	69	2	Viola hederacea	64	+
Epacris impressa	83	+	Leptospermum juniperinum	67	1	*Hypochoeris radicata	58	+
Gahnia radula	83	2	Lomandra filiformis	67	1	Cassinia aculeata	47	+
Eucalyptus obliqua	81	2	Lomandra longifolia	67	+	Amperea xiphioclada	47	1
Pteridium esculentum	78	2	Acacia mucronata	64	1	Microlaena stipoides	44	+
Tetrarrhena juncea	72	2	Billardiera scandens	64	+			

NO. OF SITES: 36 STRUCTURE: Open-forest

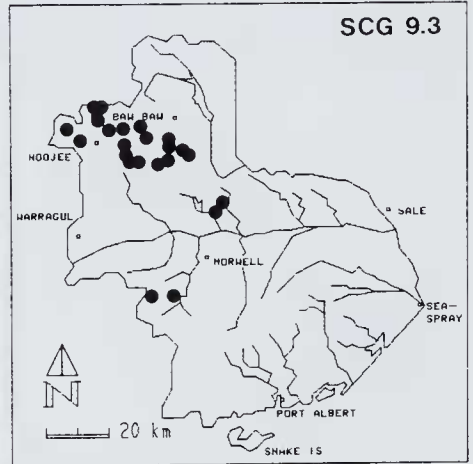
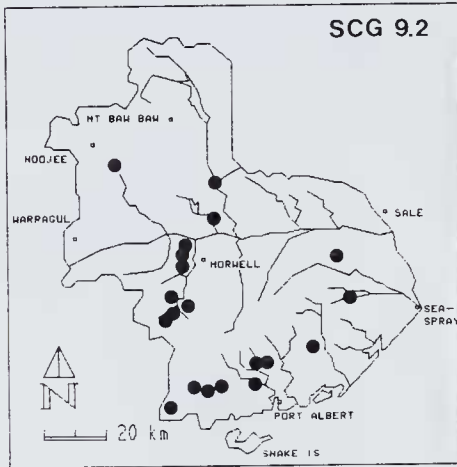
DISTRIBUTION: Scattered through the foothills of the Central Highlands and the Strzelecki Ranges.

ENVIRONMENT: Sandy-loam soils on well-drained sites in undulating country.

ALTITUDE: Mean = 141m, Highest = 400m, Lowest = 5m

MEAN FLORISTIC RICHNESS: 27 species per site MEAN WEED COMPOSITION: 4% of species, 2% of cover

NOTES: The principal difference between SCG 9.1 and SCG 9.2 is the presence of *E. considiana* in the former and the lower mean species richness of the latter. One feature of both sub-communities, although more pronounced in SCG 9.2, is the occasional dense stands of *E. sieberi*. This tree species is natural to the area, and after severe disturbance, such as wildfires and clear-felling, often becomes dominant over a floristically poor understorey.



DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.3

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Eucalyptus obliqua	100	1	Coprosma quadrifida	79	1	Gahnia sieberiana	54	1
Pteridium esculentum	96	1	Cyathea australis	75	1	Polyscias sambucifolius	54	1
Tetrarrhena juncea	96	2	Acacia mucronata	71	1	Calcuta dubia	54	1
Viola hederacea	96	1	Acacia verticillata	71	1	Hydrocotyle hirta	54	+
Eucalyptus cytellocarpa	89	1	Acacia dealbata	68	1	*Hypochoeris radicata	54	+
Gonocarpus tetracoides	89	1	Eucalyptus radiata	68	1	Prostanthera lasianthos	50	1
Fomaderris aspera	86	1	Pultenaea juniperina	64	1	Tetratheca ciliata	50	1
Cassinia aculeata	86	1	Leptosperma elatius	64	1	*Rhus fruticosus spp. agg.	50	1
Goodenia ovata	86	1	Fimelia axiflora	64	1	Oralis corniculata	46	+
Olearia lirata	86	1	Platylobium formosum	61	2	Ceranium potentilloides	54	1
Clematis aristata	82	1	Blechnum nudum	61	1			

NO. OF SITES: 28 STRUCTURE: Open-forest

DISTRIBUTION: Scattered through the Central Highlands, with two sites in the Strzelecki Ranges near Darlimurla.

ENVIRONMENT: Well-drained, loamy soils on moist and sheltered hillsides.

ALTITUDE: Mean = 331m, Highest = 700m, Lowest = 120m

MEAN FLORISTIC RICHNESS: 43 species per site MEAN WEED COMPOSITION: 3% of species, 2% of cover

NOTES: As many of the Wet Sclerophyll Forests of the study area have been cleared or were burnt in the 1950s bushfires (and are presently immature) the Damp Sclerophyll Forests of the high country have become the most important sources of timber in the south and central Gippsland region. Often, as a response to logging and fuel-reduction burns, the understorey of SCG 9.3 becomes dominated by one or two opportunistic plant species (e.g. *Platylobium formosum*, *Calcuta dubia*, *Tetrarrhena juncea*).

DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.4

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Pteridium esculentum</i>	96	1	<i>Cassinia aculeata</i>	70	+	<i>Poa australis</i> spp. agg.	56	1
<i>Viola hederacea</i>	89	+	<i>Microlaena stipoides</i>	70	+	<i>Lomandra longifolia</i>	56	1
<i>Eucalyptus obliqua</i>	85	3	<i>Lomandra filiformis</i>	70	+	<i>Gahnia radula</i>	56	1
<i>Gonocarpus tetragynus</i>	85	+	<i>Billardiera scandens</i>	67	+	<i>Hypericum gramineum</i>	56	+
<i>Eucalyptus radiata</i>	81	2	<i>Clematis aristata</i>	63	+	<i>Enacris impressa</i>	52	+
<i>Tetrarrhena juncea</i>	74	1	<i>Senecio hispidulus</i>	63	+	<i>Goodenia ovata</i>	48	+
* <i>Hypochoeris radicata</i>	74	+	<i>Deyeuxia quadrifida</i>	63	+			
<i>Lagenifera stipitata</i>	74	1	<i>Acaena anserinifolia</i>	59	+			

NO. OF SITES: 26

STRUCTURE: Open-forest

DISTRIBUTION: Concentrated around the Driffield area, with scattered occurrences south of the Strzelecki Ranges and one site near Neerim Junction.

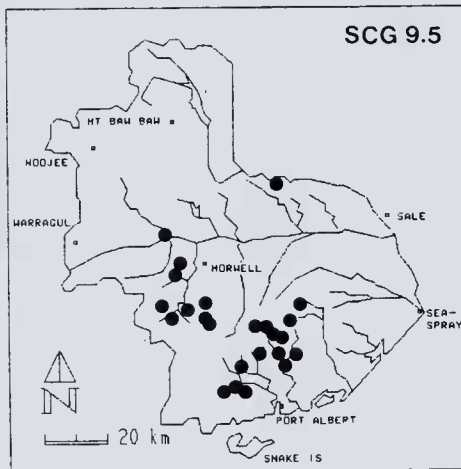
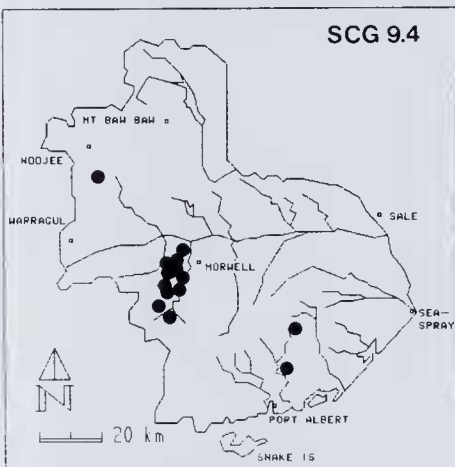
ENVIRONMENT: Moist, loamy soils on lowland hills.

ALTITUDE: Mean = 179m, Highest = 300m, Lowest = 30m

MEAN FLORISTIC RICHNESS: 35 species per site

MEAN WEED COMPOSITION: 10% of species, 7% of cover

NOTES: Like most of the Damp Sclerophyll Forest in this region SCG 9.4 has suffered from logging and burning in the past. The understorey consists almost entirely of small, rapidly growing, opportunistic species and is dominated by a few aggressive fire weeds (e.g. *Pteridium esculentum*, *Gahnia radula*, *Tetrarrhena juncea*).



DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.5

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Clematis aristata</i>	87	+	<i>Poa australis</i> spp. agg.	56	2	<i>Eucalyptus muelleriana</i>	46	2
<i>Microlaena stipoides</i>	83	+	<i>Acaena anserinifolia</i>	52	+	<i>Echinopogon ovatus</i>	42	+
<i>Viola hederacea</i>	77	+	<i>Veronica calycina</i>	52	+	<i>Dichondra repens</i>	42	+
<i>Pteridium esculentum</i>	71	1	<i>Mahlenbergia quadrifida</i>	50	+	<i>Eucalyptus cypellocarpa</i>	42	3
* <i>Hypochoeris radicata</i>	65	+	<i>Tetrarrhena juncea</i>	48	1	<i>Senecio laevis</i>	40	+
<i>Coprosma quadrifida</i>	62	1	<i>Lagenifera stipitata</i>	48	+	<i>Acacia melanoxylon</i>	40	1
<i>Geranium potentilloides</i>	58	+	<i>Cassinia aculeata</i>	48	+	<i>Olearia lirata</i>	40	1
<i>Helichrysum dendroideum</i>	58	1	<i>Goodenia ovata</i>	48	1	<i>Hydrocotyle hirta</i>	37	+
<i>Oxalis corniculata</i>	56	+	<i>Gonocarpus tetragynus</i>	46	+	<i>Hypericum gramineum</i>	37	+

NO. OF SITES: 49

STRUCTURE: Open-forest

ENVIRONMENT: Moist but well-drained loamy soils on lowland hills.

ALTITUDE: Mean = 189m, Highest = 555m, Lowest = 30m

MEAN FLORISTIC RICHNESS: 33 species per site

MEAN WEED COMPOSITION: 10% of species, 6% of cover

NOTES: In places where *Pteridium esculentum* and *Tetrarrhena juncea* do not dominate the understorey SCG 9.5 forms an attractive, open vegetation. The understorey is often dominated by tussock grasses with only sparse shrub cover and the canopy consists of tall *Eucalyptus globulus*, *E. viminalis* and *E. muelleriana*. SCG 9.5 is the only sub-community in the study area supporting *E. globulus*.

DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.6

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Clematis aristata</i>	93	+	<i>Tetrarrhena juncea</i>	79	+	<i>Helichrysum dendroideum</i>	64	2
<i>Coprosma quadrifida</i>	93	+	* <i>Rubus vestitus</i>	79	+	<i>Geranium potentilloides</i>	57	+
<i>Viola hederacea</i>	86	+	<i>Hydrocotyle hirta</i>	71	+	<i>Polystichum proliferum</i>	57	+
<i>Acacia melanoxylon</i>	79	2	<i>Stellaria flaccida</i>	71	+	<i>Poa labillardieri</i>	57	1
<i>Pteridium esculentum</i>	79	+	<i>Microlaena stipoides</i>	71	+			

NO. OF SITES: 14 STRUCTURE: Open-forest

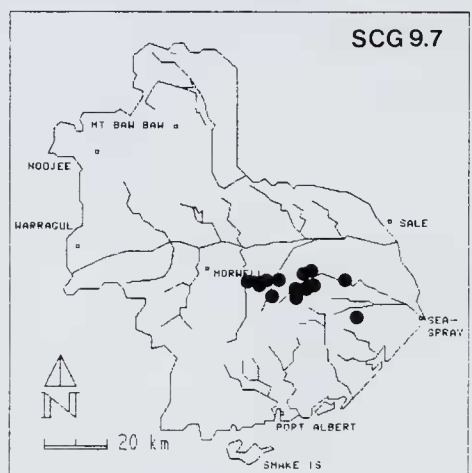
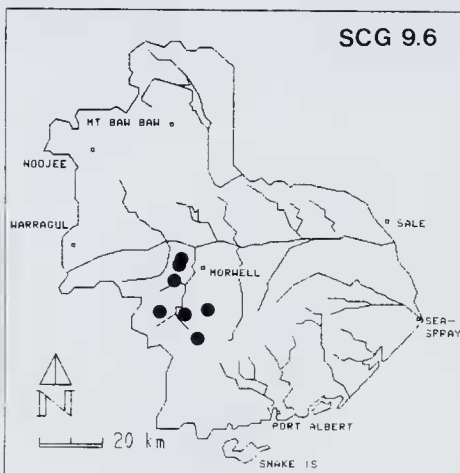
DISTRIBUTION: Concentrated in the Driffield area, with scattered occurrences in the foothills of the Strzelecki Ranges.

ENVIRONMENT: Moist but well-drained soils on the lower slopes and gullies of lowland hills.

ALTITUDE: Mean = 168m, Highest = 300m, Lowest = 110m

MEAN FLORISTIC RICHNESS: 32 species per site MEAN WEED COMPOSITION: 10% of species, 8% of cover

NOTES: SCG 9.6 is one of the few forests of the region in which an understorey tree species (in this case *Acacia melanoxylon*) is a more consistent and dominant part of the canopy than the major eucalypts.



DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.7

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Pteridium esculentum</i>	97	3	<i>Lagenifera stipitata</i>	58	1	<i>Acrotiche serrulata</i>	52	1
<i>Poa australis</i> spp. agg.	94	2	<i>Leptospermum juniperinum</i>	58	1	<i>Boschia cinerea</i>	48	1
* <i>Hypochoeris radicata</i>	94	1	<i>Eucalyptus consideniana</i>	58	3	Gramineae spp.	48	1
<i>Epacris impressa</i>	79	2	<i>Lomandra longifolia</i>	58	1	<i>Pterostylis</i> spp.	48	1
<i>Gonocarpus tetragynus</i>	64	1	<i>Pimelea linifolia</i>	55	1	<i>Acianthus exsertus</i>	45	1
<i>Gahnia radula</i>	61	2	<i>Opercularia varia</i>	55	1			
<i>Lomandra filiformis</i>	61	2	<i>Senecio gunnii</i>	52	1			

NO. OF SITES: 33 STRUCTURE: Open-forest

DISTRIBUTION: Concentrated north of the Strzelecki Ranges, between Traralgon and Merriman Creeks, with outlying occurrences at Holey Plains and south of Monkey Creek.

ENVIRONMENT: Relatively flat areas on sandy-loam soils.

ALTITUDE: Mean = 166m, Highest = 230m, Lowest = 80m

MEAN FLORISTIC RICHNESS: 26 species per site MEAN WEED COMPOSITION: 8% of species, 7% of cover

NOTES: This sub-community occurs in ecologically and geographically similar sites to those supporting SCG 10.3 (*Leptospermum myrsinoides* Heathland). The two sub-communities share many species although *L. myrsinoides* does not dominate the understorey of SCG 9.7.

DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.8

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Gonocarpus tetragynus	100	1	Acrotliche serrulata	80	1	Gahnia radula	60	2
*Hypochoeris radicata	100	1	Eucalyptus radiata	80	3	Hypericum gramineum	60	1
Poa australis spp. agg.	100	3	Pterostylis spp.	80	1	Leptospermum juniperinum	60	2
Pteridium esculentum	100	2	Lomandra filiformis	70	1	Lomandra longifolia	60	1
Epacris impressa	80	1	Eucalyptus viminalis	60	2			

NO. OF SITES: 10 STRUCTURE: Open-forest

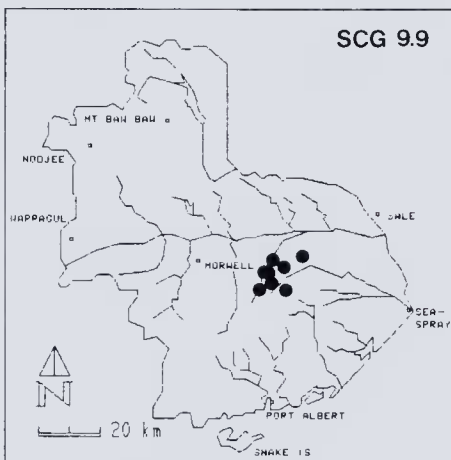
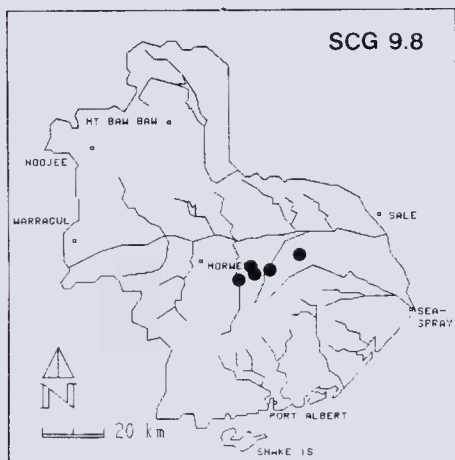
DISTRIBUTION: Concentrated north of the Strzelecki Ranges around Tranalgon Creek, with isolated occurrences near Gormandale and Flynn Creek.

ENVIRONMENT: Relatively flat areas on loam to clay-loam soils.

ALTITUDE: Mean = 123m, Highest = 180m, Lowest = 70m

MEAN FLORISTIC RICHNESS: 26 species per site MEAN WEED COMPOSITION: 8% of species, 6% of cover

NOTES: The soils in SCG 9.8 are heavier than those of SCG 9.7 and the former lacks those species which are also common in *Leptospermum myrsinoides* Heathland and indicative of sandy soils. The high cover values for species such as *Pteridium esculentum*, *Gahnia sieberiana* and *Leptospermum juniperinum* in SCG 9.8 suggests a history of disturbance.



DAMP SCLEROPHYLL FOREST : SUB-COMMUNITY SCG 9.9

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Eucalyptus radiata	94	3	Pteridium esculentum	81	2	Leptospermum juniperinum	69	2
Poa australis spp. agg.	81	2	*Hypochoeris radicata	75	1	Gonocarpus tetragynus	63	1

NO. OF SITES: 16 STRUCTURE: Open-forest

DISTRIBUTION: Concentrated north of the Strzelecki Ranges, between Flynn and Merriman Creeks.

ENVIRONMENT: Relatively flat areas on loam to clay-loam soils.

ALTITUDE: Mean = 148m, Highest = 300m, Lowest = 80m

MEAN FLORISTIC RICHNESS: 19 species per site MEAN WEED COMPOSITION: 11% of species, 9% of cover

NOTES: SCG 9.9 is the most disturbed and species poor representative of this community. It is likely that heavy grazing pressure and occasional fires are the main disturbance factors.

Leptospermum myrsinoides HEATHLAND : SUB-COMMUNITY SCG 10.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Monotoca scoparia	84	1	Leucopogon ericoides	56	1	Lomandra longifolia	47	1
Pteridium esculentum	83	3	Lomandra filiformis	55	1	Gonocarpus tetragynus	47	1
Epacris impressa	78	1	Amperea xiphioclada	53	1	Leptospermum juniperinum	45	1
Bossiaea cinerea	69	1	Banksia marginata	51	1	Cautis pentandra	44	1
Banksia serrata	67	2	Acacia oxycedrus	51	1	Hibbertia acicularis	44	1
Eucalyptus nitida	60	2	Leptospermum myrsinoides	49	2	Dillwynia glaberrima	42	1

NO. OF SITES: 54 STRUCTURE: Closed-heath to Open-forest

DISTRIBUTION: Concentrated around Holey Plains, with scattered occurrences south of the Strzelecki Ranges and along the coast west from Tarra River.

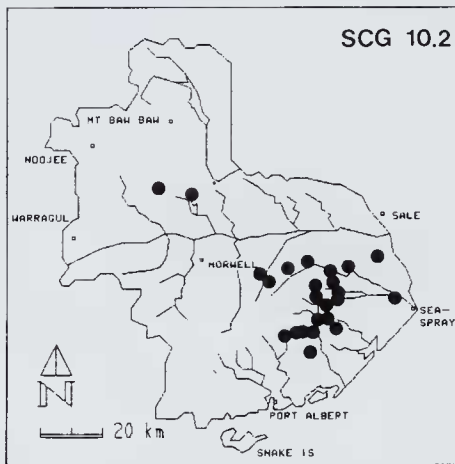
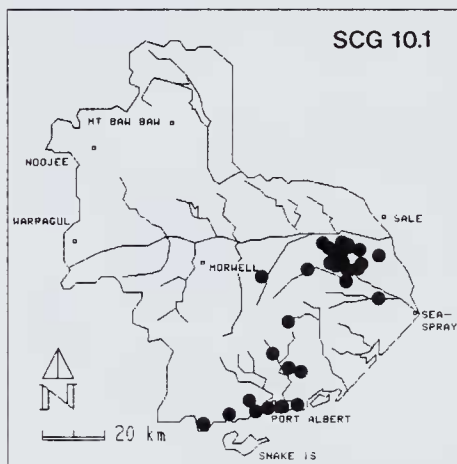
ENVIRONMENT: Flat or undulating areas on deep siliceous sands.

ALTITUDE: Mean = 102m, Highest = 200m, Lowest = 5m

MEAN FLORISTIC RICHNESS: 16 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: This is the least species rich of the sub-communities of Community 10 and is the only one in which *Eucalyptus nitida* is a character species. The presence of this species and others such as *Cautis pentandra* and *Xanthorrhoea australis*, creates a superficial similarity between SCG 10.1 and some of the woodlands in the Grampians. In the southern region, particularly Gellions Run, the major tree species is *E. viminalis*.

**Leptospermum myrsinoides HEATHLAND : SUB-COMMUNITY SCG 10.2**

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Epacris impressa	90	1	Monotoca scoparia	68	1	Banksia marginata	61	1
Leptospermum myrsinoides	77	2	Bossiaea cinerea	68	1	Lomandra filiformis	61	1
Leptospermum juniperinum	74	1	Hibbertia acicularis	68	1	Gonocarpus tetragynus	58	1
Eucalyptus considiniana	71	2	Banksia serrata	65	2	Acacia oxycedrus	55	1
Gahnia radula	71	2	Amperea xiphioclada	65	1	Dillwynia glaberrima	48	1
Pteridium esculentum	68	2	Xanthorrhoea minor	61	1	Lomandra longifolia	48	1

NO. OF SITES: 31 STRUCTURE: Closed-heath to Open-forest

DISTRIBUTION: Occurs mainly around the eastern foothills of the Strzelecki Ranges, with two isolated sites in the southern foothills of the Baw Baw Plateau.

ENVIRONMENT: Flat or undulating areas on deep siliceous sands.

ALTITUDE: Mean = 162m, Highest = 300m, Lowest = 40m

MEAN FLORISTIC RICHNESS: 24 species per site

MEAN WEED COMPOSITION: 2% of species, 2% of cover

NOTES: The differences between SCG 10.2 and SCG 10.3 are only minor and the two sub-communities represent different ends of a subtle continuum. Perhaps the most significant difference between the two is the relative scarcity of *Banksia serrata* in SCG 10.3.

Leptospermum myrsinoides HEATHLAND : SUB-COMMUNITY SCG 10.3

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Epacris impressa</i>	93	1	<i>Leptospermum juniperinum</i>	65	2	* <i>Hypochoeris radicata</i>	47	1
<i>Pteridium esculentum</i>	90	2	<i>Monotoca scoparia</i>	63	1	<i>Banksia serrata</i>	44	2
<i>Gonocarpus tetragynus</i>	78	1	<i>Poa australis</i> spp. agg.	61	2	<i>Banksia marginata</i>	44	1
<i>Bossiaea cinerea</i>	78	2	<i>Lomandra longifolia</i>	54	1	<i>Tetralochea pilosa</i>	43	1
<i>Gahnia radula</i>	69	1	<i>Correa reflexa</i>	54	1	<i>Pimelea linifolia</i>	42	1
<i>Amperea xiphochlada</i>	67	1	<i>Olliwynia glaberrima</i>	53	1	<i>Xanthorrhoea minor</i>	39	1
<i>Leptospermum myrsinoides</i>	67	2	<i>Lomandra filiformis</i>	53	1	<i>Hibbertia acicularis</i>	38	1
<i>Eucalyptus considianiana</i>	66	2	<i>Leucopogon virgatus</i>	49	1			

NO. OF SITES: 116 STRUCTURE: Closed-heath to Open-forest

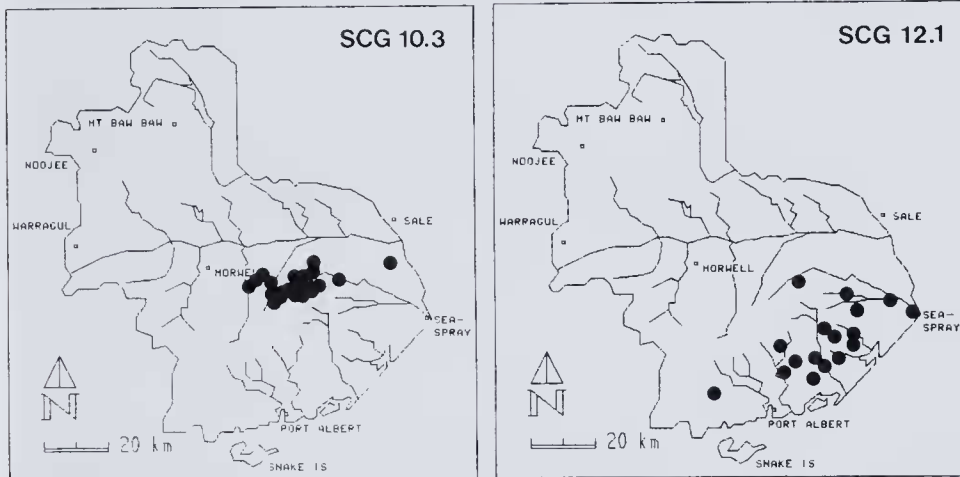
DISTRIBUTION: Concentrated on the northern side of the Strzelecki Ranges in the vicinity of Traralgon, Flynn and Merriman Creeks.

ENVIRONMENT: Flat or undulating areas on deep siliceous sands.

ALTITUDE: Mean = 172m, Highest = 310m. Lowest = 70m

MEAN FLORISTIC RICHNESS: 22 species per site MEAN WEED COMPOSITION: 3% of species, 2% of cover

NOTES: Community 10 represents the largest area of *Leptospermum myrsinoides* Heathland in Victoria. SCG 10.3 is the largest stand of this community in the study area. There are only subtle differences between SCG 10.3 and SCG 10.2 and most significant of these is the lower abundance of *Banksia serrata* in the former.

**GRASSY WOODLAND** : SUB-COMMUNITY SCG 12.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Lomandra filiformis</i>	75	1	<i>Eucalyptus bridgesiana</i>	65	1	<i>Xanthorrhoea minor</i>	60	1
<i>Oxalis corniculata</i>	75	+	<i>Pimelea humilis</i>	65	1	<i>Hypericum gramineum</i>	55	1
<i>Pteridium esculentum</i>	70	2	<i>Eucalyptus muelleriana</i>	60	2	<i>Poa australis</i> spp. agg.	55	1
<i>Microlaena stipoides</i>	70	1	<i>Gahnia radula</i>	60	2	<i>Tricoryne elatior</i>	55	+
<i>Dichondra repens</i>	65	1	<i>Astroloma humifusum</i>	60	+	<i>Bossiaea prostrata</i>	50	+
<i>Lomandra longifolia</i>	65	1	<i>Poranthera microphylla</i>	60	+	* <i>Centaurium tenuiflorum</i>	50	+

NO. OF SITES: 20 STRUCTURE: Open-forest

DISTRIBUTION: Occurs mainly on lowland areas south and east of the Strzelecki Ranges.

ENVIRONMENT: Flat or undulating inland areas on well-drained loamy soils.

ALTITUDE: Mean = 63m, Highest = 170m, Lowest = 20m

MEAN FLORISTIC RICHNESS: > 22 species per site MEAN WEED COMPOSITION: 6% of species, 3% of cover

NOTES: SCG 12.1 is the least disturbed of the community 12 sub-communities. This is perhaps because it grows on slightly more sandy soil than the rest of the community and is less suitable for pasture improvement. Its natural flora is made up of more sclerophyllous species and fewer grasses and herbs than that of SCG 12.2 to 12.4 so it is also less suitable for grazing.

SCG 12.1 is one of only two sub-communities in the study area in which *Eucalyptus muelleriana* is a character species.

GRASSY WOODLAND : SUB-COMMUNITY SCG 12.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
*Hypochaeris radicata	96	1	Lagenifera stipitata	69	1	Eucalyptus viminalis	54	2
Poa australis spp. agg.	92	2	Gonocarpus tetragynus	65	1	Leptospermum juniperinum	54	1
Pteridium esculentum	88	3	*Holcus lanatus	65	2	Gramineae spp.	50	1
Hydrocotyle laxiflora	77	1	Hypericum gramineum	62	1	Senecio gunnii	50	1
Eucalyptus radiata	77	3	Foranthera microphylla	54	1	Acrotriche serrulata	50	1
Pimelea linifolia	73	1	Dichondra repens	54	1			

NO. OF SITES: 24

STRUCTURE: Open-forest to woodland

DISTRIBUTION: Scattered to the north of the Strzelecki Ranges between Traralgon and Merriman Creeks.

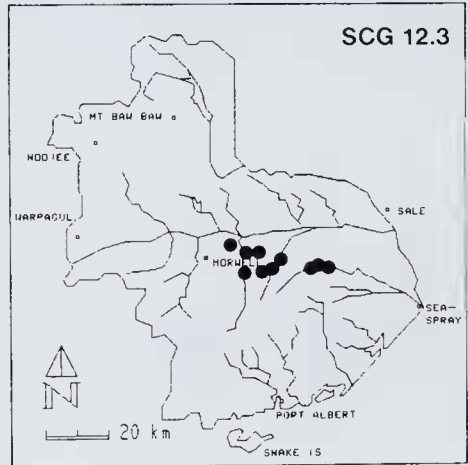
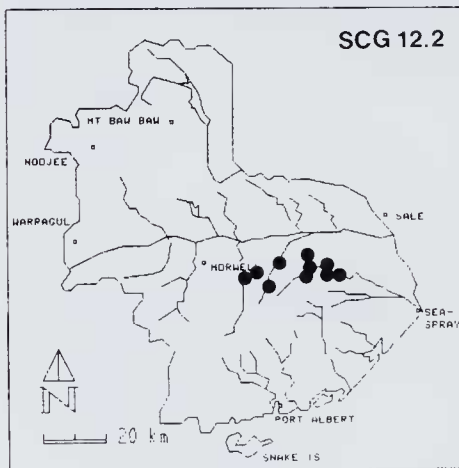
ENVIRONMENT: Flat or gently undulating areas on clay-loam soils.

ALTITUDE: Mean = 119m, Highest = 210m, Lowest = 70m

MEAN FLORISTIC RICHNESS: 26 species per site

MEAN WEED COMPOSITION: 15% of species, 13% of cover

NOTES: Much of the land on which this vegetation grows has been subject to a long history of grazing and pasture improvement. The natural vegetation occurs in small pockets rather than large continuous stands and supports significant populations of introduced species, most of which are of pastoral origin.



GRASSY WOODLAND : SUB-COMMUNITY SCG 12.3

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
*Hypochaeris radicata	100	2	*Cynosurus echanatus	74	1	Gramineae spp.	56	2
*Holcus lanatus	91	2	Hydrocotyle laxiflora	68	2	Geranium solanderi	50	1
Dryalis corniculata	88	1	Poa australis spp. agg.	68	2	Lomandra filiformis	44	1
Eucalyptus radiata	82	3	Dichondra repens	65	1	Trifolium spp.	44	1
*Cirsium vulgare	76	1	*Stellaria media	62	2			
Pteridium esculentum	74	2	Eucalyptus viminalis	59	2			

NO. OF SITES: 34

STRUCTURE: Open-forest to woodland

DISTRIBUTION: Scattered to the north of the Strzelecki Ranges, extending from Traralgon Creek eastwards to Merriman Creek near Wallung.

ENVIRONMENT: Flat or gently undulating areas on clay-loam soils.

ALTITUDE: Mean = 127m, Highest = 220m, Lowest = 40m

MEAN FLORISTIC RICHNESS: 24 species per site

MEAN WEED COMPOSITION: 33% of species, 33% of cover

NOTES: SCG 12.3 is the most disturbed and weed infested sub-community in this study. Introduced grasses and herbs dominate the understorey in most places, and most of the native species are opportunists. Like SCG 12.2 and SCG 12.4 the areas supporting SCG 12.3 are usually small and surrounded by pastures.

GRASSY WOODLAND : SUB-COMMUNITY SCG 12.4

CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A
*Hypochoeris radicata	93	1	Eucalyptus radiata	63	2	Eucalyptus viminalis	53	3
*Holcus lanatus	72	2	Dichondra repens	60	1	Hydrocotyle laxiflora	50	1
Poa australis spp. agg.	63	2	Senecio spp.	57	1			
Pteridium esculentum	63	2	*Conyza bonariensis	57	1			

NO. OF SITES: 30

STRUCTURE: Open-forest to Woodland

DISTRIBUTION: Scattered north of the Strzelecki Ranges, near Traralgon, Flinn and Merriman Creeks.

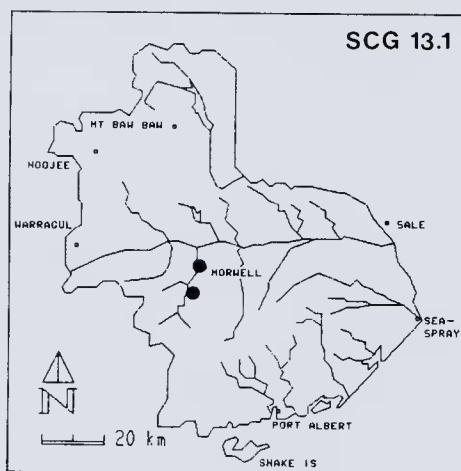
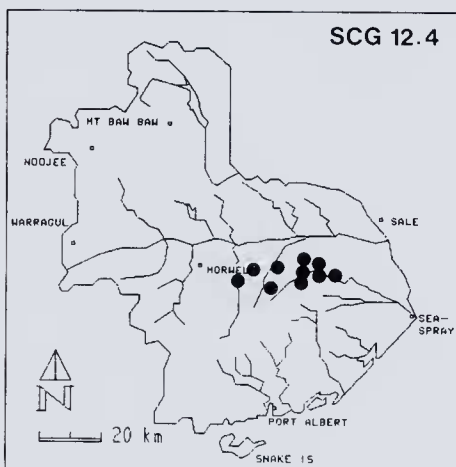
ENVIRONMENT: Sheltered boggy areas, or close to creeks and rivers. Soils often poorly drained clay-loams.

ALTITUDE: Mean = 96m, Highest = 180m, Lowest = 70m

MEAN FLORISTIC RICHNESS: 18 species per site

MEAN WEED COMPOSITION: 22% of species, 20% of cover

NOTES: Although not as weedy a SCG 12.3, SCG 12.4 supports an understorey which is usually dominated by introduced grasses and herbs and opportunistic native species. Occasionally, in wet depressions, the understorey is dominated by dense thickets of *Metaleuca ericifolia* under a canopy of *Eucalyptus ovata*.



FRESHWATER MARSH : SUB-COMMUNITY SCG 13.1

CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A
<i>Lemna minor</i>	100	1	<i>Spirodela oligorrhiza</i>	100	1	<i>Triglochin procera</i>	100	1

NO. OF SITES: 2

STRUCTURE: Herbland

DISTRIBUTION: Occurs along Morwell River.

ENVIRONMENT: Shallow still water.

ALTITUDE: Mean = 40m, Highest = 50m, Lowest = 30m

MEAN FLORISTIC RICHNESS: 7 species per site

MEAN WEED COMPOSITION: 7% of species, 2% of cover

NOTES: The number of sites recorded for SCG 13.1 is an underestimate of its actual abundance. This species-poor, aquatic vegetation is found in a number of ponds and billabongs near the lower-altitude tributaries of the Morwell river.

FRESHWATER MARSH : SUB-COMMUNITY SCG 13.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Eleocharis sphacelata</i>	100	2	<i>Typha</i> Spp.	67	3			
<i>Triglochin procerum</i>	100	4	<i>Potamogeton</i> Spp.	67	4			

NO. OF SITES: 3 STRUCTURE: Closed-sedgeland

DISTRIBUTION: Gellion's Run near Gelliondale.

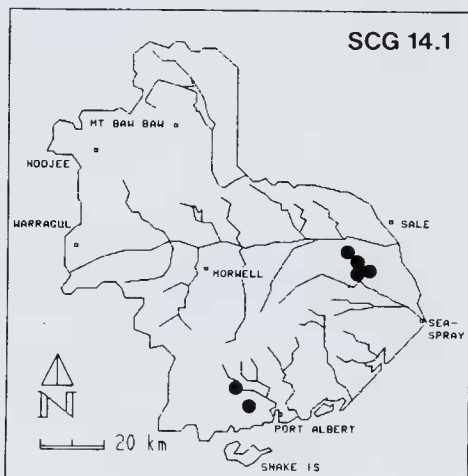
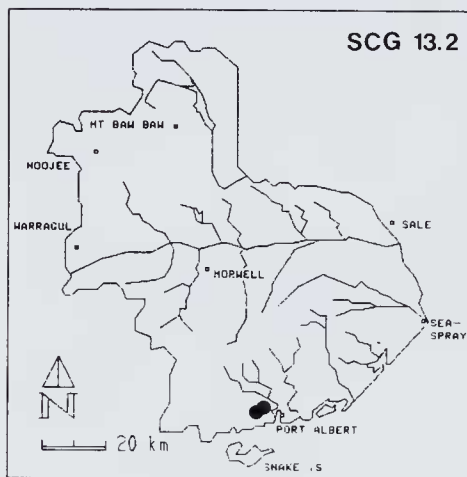
ENVIRONMENT: Freshwater ponds which develop on clay soils in otherwise poorly-drained, sandy areas.

ALTITUDE: Mean = 0m, Highest = 0m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 4 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: Like most aquatic sub-communities, SCG 13.2 is floristically poor and generally dominated by one or two species. Unlike SCG 13.1, SCG 13.2 plants are rooted in the substrate and have aerial shoots even though the ponds in which they grow generally contain water all year round.



COASTAL HEATHLAND : SUB-COMMUNITY SCG 14.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Empodisma minus</i>	100	2	<i>Melaleuca squarrosa</i>	67	4	<i>Leptocarpus tenax</i>	67	3
<i>Leptospermum juniperinum</i>	83	2	<i>Selaginella uliginosa</i>	83	1			

NO. OF SITES: 6 STRUCTURE: Closed-heath

DISTRIBUTION: Scattered occurrences at Holey Plains and Gellion's Run.

ENVIRONMENT: Poorly drained sites, usually of clay and sand substrates. Water is often close to or above the soil surface.

ALTITUDE: Mean = 80m, Highest = 120m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 16 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: *Melaleuca squarrosa* and *Leptospermum juniperinum* dominate this vegetation and produce a very deep leaf litter. As a consequence few understorey species are common in the generally shaded and water-logged substrate of SCG 14.1. The most successful of the understorey species are members of the Restionaceae and Cyperaceae.

COASTAL HEATHLAND : SUB-COMMUNITY SCG 14.2

CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A
<i>Leptospermum juniperinum</i>	100	3	<i>Xanthorrhoea resinosa</i>	71	4	<i>Lepidosperma filiforme</i>	57	2
<i>Selaginella uliginosa</i>	100	2	<i>Casuarina paludosa</i>	64	1	<i>Leptospermum myrsinoides</i>	57	2
<i>Dillwynia glaberrima</i>	86	2	<i>Dampiera stricta</i>	64	1	<i>Epacris microphylla</i>	57	1
<i>Epacris impressa</i>	86	1	<i>Schoenus tenuissimus</i>	64	2	<i>Hibbertia procumbens</i>	57	1
<i>Leptocarpus tenax</i>	86	2	<i>Eucalyptus viminalis</i>	64	2	<i>Xanthorrhoea minor</i>	57	1
<i>Schoenus brevifolius</i>	86	3	<i>Burchardia umbellata</i>	57	+			
<i>Lindsaea linearis</i>	71	1	<i>Empodisma minus</i>	57	2			

NO. OF SITES: 14 STRUCTURE: Closed-heath

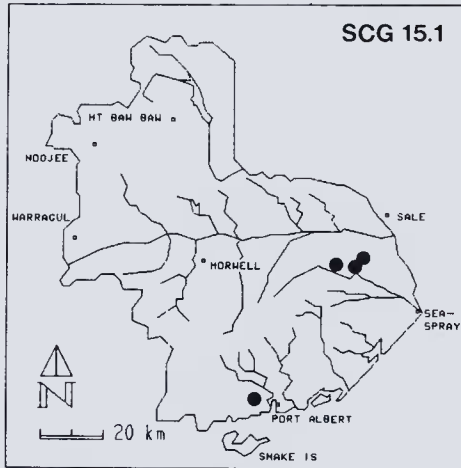
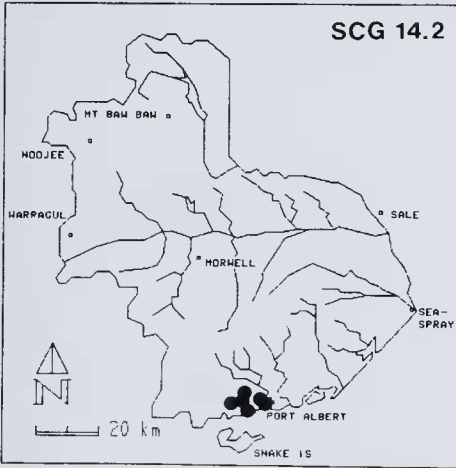
DISTRIBUTION: Scattered through and around Gellion's Run

ENVIRONMENT: Damp depressions of near-coastal plains.

ALTITUDE: Mean = 5m, Highest = 68m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 29 species per site MEAN WEED COMPOSITION: 1% of species, 0% of cover

NOTES: The drier soils and lower densities of *Mejaleuca squarrosa* and *Leptospermum juniperinum* than in SCG 14.1 correlate with a significantly higher floristic richness for SCG 14.2. This sub-community is a western representative of the 'grass-tree plain' vegetation which is best developed in East Gippsland (Forbes et al., 1982).



SEDGE SWAMPLAND : SUB-COMMUNITY SCG 15.1

CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A	CHARACTER SPECIES	ZFREQ	C/A
<i>Lepidosperma longitudinale</i>	100	4						

NO. OF SITES: 7 STRUCTURE: Closed-sedge-land

DISTRIBUTION: Holey Plains and Gellion's Run.

ENVIRONMENT: Damp depression on poorly-drained, often waterlogged clay soils.

ALTITUDE: Mean = 95m, Highest = 150m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 5 species per site MEAN WEED COMPOSITION: 2% of species, 1% of cover

NOTES: *Lepidosperma longitudinale*, like the related *Eleocharis sphaelata* (SCG 13.2), often grows in dense swards to the exclusion of all other ground cover species. It is probably the commonest sedge species of waterlogged clay soils in Victoria.

Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Carex fascicularis	100	1	Leptospermum lanigerum	100	2	Scirpus marginatus	100	1
*Centaurium tenuiflorum	100	+	Lilaeopsis polyantha	100	1	Villarsia reniformis	100	1
Melichrysum rosmarinifolium	100	2	Melaleuca ericifolia	100	5	Hydrocotyle spp.	100	2
Lepidosperma longitudinale	100	2	Melaleuca squarrosa	100	3			
Leptocarpus tenax	100	1	Phragmites australis	100	1			

NO. OF SITES: 2

STRUCTURE: Closed-scrub

DISTRIBUTION: Gellion's Run near Alberton.

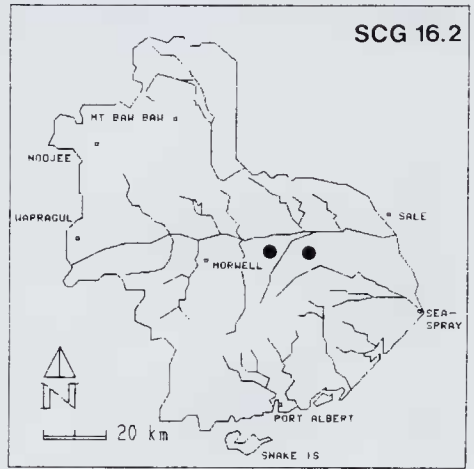
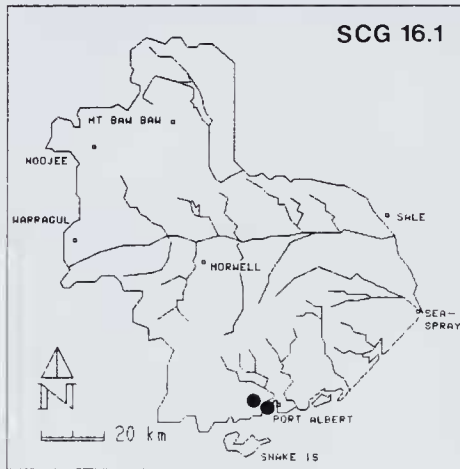
ENVIRONMENT: Poorly-drained sand-clay soils on flat or gently undulating land.

ALTITUDE: Mean = 0m, Highest = 0m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 17 species per site

MEAN WEED COMPOSITION: 7% of species, 4% of cover

NOTES: *Melaleuca squarrosa* and *M. ericifolia* usually grow on quite different soil types (the former on waterlogged sands, the latter on heavier soils) but SCG 16.1 represents an unusual intermediate environment which is able to support both. As is usual for vegetation dominated by either of these species, the understorey of SCG 16.1 is open and made up principally of small herbaceous species.



Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Melaleuca ericifolia	100	3	*Hypochoeris radicata	67	1	Phragmites australis	67	2

NO. OF SITES: 2

STRUCTURE: Open-scrub to Closed-scrub

DISTRIBUTION: Both sites are in the Flynn's Creek area.

ENVIRONMENT: Damp depressions on poorly-drained clay soils in flat or gently undulating country.

ALTITUDE: Mean = 60m, Highest = 70m, Lowest = 50m

MEAN FLORISTIC RICHNESS: 11 species per site

MEAN WEED COMPOSITION: 33% of species, 20% of cover

NOTES: *Melaleuca ericifolia* and *Phragmites communis* are common, opportunistic species on roadside verges, drains and damp depressions on alienated land. Sub-community SCG 16.2 is an example of this situation where much of the understorey is made up of introduced species and the overstorey is dominated by native trees and shrubs.

Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.3

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Carex appressa	89	+	*Cyperus eragrostis	67	+	*Myosotis laxa	56	+
*Rumex conglomeratus	89	+	Calystegia sepium	56	1	*Nasturtium officinale	56	+
Polygonum minus	78	1	Melaleuca ericifolia	56	5			

NO. OF SITES: 7 STRUCTURE: Closed-scrub to Sedgeland

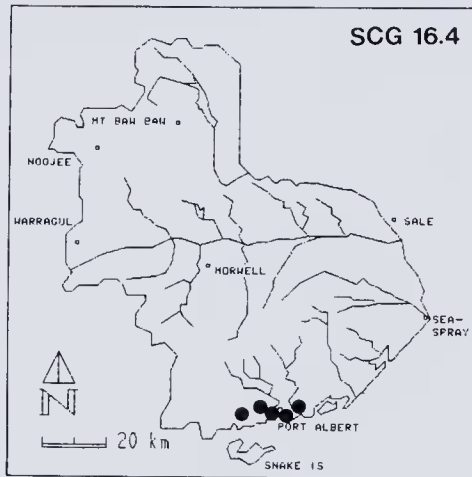
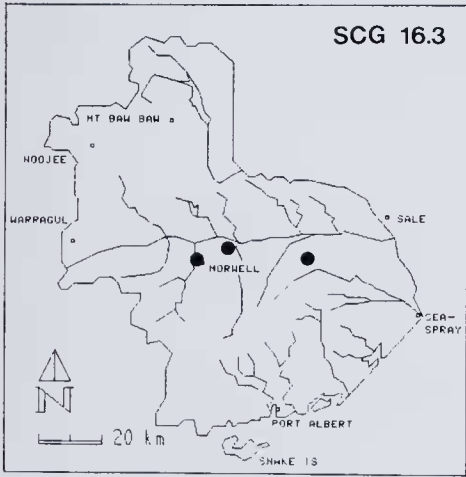
DISTRIBUTION: Morwell River near Morwell, south of the Latrobe River and west of Traralgon.

ENVIRONMENT: Disturbed areas of damp depressions, with poor drainage and clay soils.

ALTITUDE: Mean = 30m, Highest = 30m, Lowest = 30m

MEAN FLORISTIC RICHNESS: 19 species per site MEAN WEED COMPOSITION: 31% of species, 18% of cover

NOTES: This sub-community, like SCG 16.2, is one where the opportunistic native species Melaleuca ericifolia and Phragmites communis dominate a disturbed area of land with a ground cover consisting largely of introduced herbs and grasses.



Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.4

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Melaleuca ericifolia	100	5	Acacia longifolia	83	1	Disphyma clavellatum	83	1
Senecio lautus	83	1	Acacia verticillata	83	1	Rhagodia baccata	83	1

NO. OF SITES: 6 STRUCTURE: Closed-scrub

DISTRIBUTION: Coastal dunes between Port Welshpool and Port Albert.

ENVIRONMENT: Poorly-drained sands on coasts immediately inland from the salt spray zone.

ALTITUDE: Mean = 0m, Highest = 2m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 16 species per site MEAN WEED COMPOSITION: 13% of species, 8% of cover

NOTES: Melaleuca ericifolia dominates this species-poor sub-community which may be a disturbed version of SCG 21.2 (Coastal Banksia Woodland).

Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.5

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Mentha diemienica</i>	100	+	<i>Hydrocotyle sibthorpioides</i>	100	+	<i>Baumea juncea</i>	100	2
<i>Centella cordifolia</i>	100	+	<i>Leptocarpus brownii</i>	100	1	<i>Melaleuca ericifolia</i>	100	3
<i>Gahnia trifida</i>	100	1	<i>Lobelia alata</i>	100	1	<i>Samolus repens</i>	100	1

NO. OF SITES: 2 STRUCTURE: Closed-scrub to Closed-herbfield

DISTRIBUTION: Restricted to Snake Island.

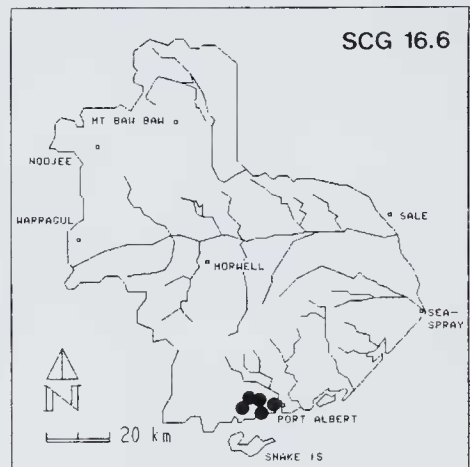
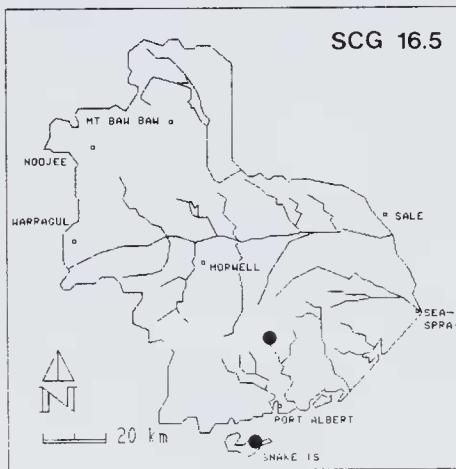
ENVIRONMENT: Poorly-drained mud-flats immediately inland from the salt marsh and subject to sea spray.

ALTITUDE: Mean = 1m, Highest = 2m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 16 species per site

MEAN WEED COMPOSITION: 6% of species, 3% of cover

NOTES: SCG 16.5 usually grows adjacent to the salt marsh on Snake Island. However the lack of any salt-tolerant species in this sub-community suggests that the waterlogged soils are inundated with fresh water rather than sea water.

**Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.6**

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Centella cordifolia</i>	100	1	<i>Selaginella uliginosa</i>	67	1	<i>Lagenifera gracilis</i>	56	1
<i>Leptospermum juniperinum</i>	89	2	<i>Gahnia trifida</i>	67	2	<i>Schoenus tesquorum</i>	56	3
<i>Leptocarpus tenax</i>	78	2	<i>Gnaphalium</i> spp.	67	1	<i>Gonocarpus micranthus</i>	56	1
<i>Melaleuca ericifolia</i>	78	3	* <i>Hypochoeris radicata</i>	67	+	<i>Hemarthra uncinata</i>	56	1
<i>Baumea acuta</i>	78	2	<i>Lobelia alata</i>	67	1	<i>Microlaena stipoides</i>	56	1
<i>Goodenia humilis</i>	67	2	<i>Gonocarpus tetragynus</i>	56	1			
<i>Deyeuxia densa</i>	67	1	* <i>Centaureum tenuiflorum</i>	56	+			

NO. OF SITES: 9 STRUCTURE: Closed-scrub

DISTRIBUTION: Concentrated in the region of Gellions Run to the South.

ENVIRONMENT: Poorly-drained, sandy-clay soils on flat or gently undulating terrain.

ALTITUDE: Mean = 0m, Highest = 5m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 31 species per site

MEAN WEED COMPOSITION: 4% of species, 1% of cover

NOTES: This is the least weedy of the SCG 16 sub-communities. It grows in association with the Coastal Heathland of Gellions Run and consequently supports a number of species which are also characteristic of that vegetation. SCG 16.6 is the only sub-community in the region in which the relatively uncommon species *Deyeuxia densa* and *Schoenus tesquorum* are character species.

Melaleuca ericifolia SCRUB : SUB-COMMUNITY SCG 16.7

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Acacia stricta	100	+	Leptospermum juniperinum	100	2	Oanthonia laevis	75	1
Bossiaea prostrata	100	+	Melaleuca ericifolia	100	2	Orosera peltata	75	+
Centella cordifolia	100	+	Microlaena stipoides	100	1	*Hypochoeris radicata	75	+
Eucalyptus ovata	100	2	Stipa nervosa	100	2	Poa australis spp. agg.	75	1
Gahnia radula	100	2	Oxyechia quadriseta	75	+	Senecio glomeratus	75	+
Gonocarpus tetragynus	100	1	Schoenus apogon	75	+			

NO. OF SITES: 5 STRUCTURE: Closed-scrub

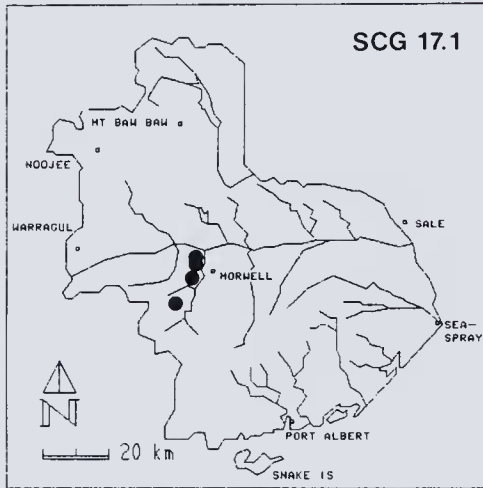
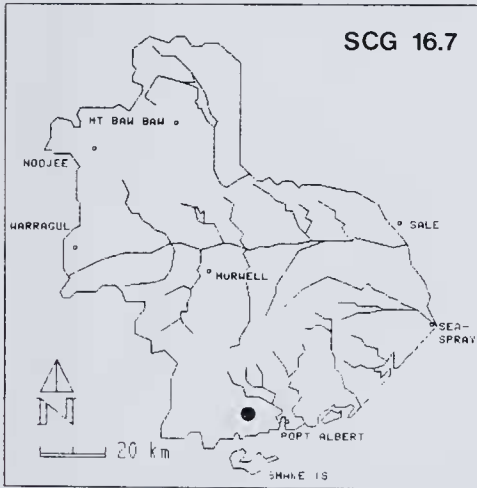
DISTRIBUTION: An isolated occurrence in the Hedley Range to the south.

ENVIRONMENT: Poorly-drained, sandy-clay soils on hilly terrain.

ALTITUDE: Mean = 15m, Highest = 15m, Lowest = 15m

MEAN FLORISTIC RICHNESS: 36 species per site MEAN WEED COMPOSITION: 11% of species, 5% of cover

NOTES: Many of the *M. ericifolia* sub-communities are on disturbed land which supports a range of introduced, opportunistic plants. SCG 16.7, however, supports mainly native species and is quite floristically rich. Unlike other sub-communities of SCG 16 this sub-community is not entirely dominated by *M. ericifolia* even though it is a consistent and significant part of the canopy.



RIPARIAN SCRUB : SUB-COMMUNITY SCG 17.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Carex appressa	86	+	Poa tenera	71	1	Leptospermum juniperinum	57	2
Gratiola peruviana	86	+	Helichrysum dendroideum	71	+	Melaleuca squarrosa	57	3
Tetrarrhena juncea	86	+	Hydrocotyle tripartita	57	+	Isolepis inundata	57	+
Cyperus lucidus	71	1	Acacia melanoxylon	57	2			
Gnaphalium involucreatum	71	+	Histiorteria incisa	57	+			

NO. OF SITES: 7 STRUCTURE: Low open-woodland to Closed Scrub

DISTRIBUTION: Foothills of the Strzelecki Ranges in the Griffield area.

ENVIRONMENT: Shallow and slow-running watercourses.

ALTITUDE: Mean = 111m, Highest = 150m, Lowest = 90m

MEAN FLORISTIC RICHNESS: 25 species per site MEAN WEED COMPOSITION: 12% of species, 8% of cover

NOTES: Riparian vegetation is often floristically very rich (e.g. Culllan *et al.*, 1981), however SCG 17.1 is relatively poor in species. This is probably due to the clearing of native vegetation right up to the banks of local watercourses resulting in the destruction of many specialist waterside species.

RIPARIAN SCRUB : SUB-COMMUNITY SCG 17.2

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Blechnum minus	100	1	Leptospermum lanigerum	80	3	*Solarium nigrum	60	+
*Hypochoeris radicata	100	+	Baumea tetragona	80	2	*Sonchus oleraceus	60	+
Lobelia alata	100	+	Schoenus maschalinus	60	+	Viola hederacea	60	1
Melaleuca squarrosa	100	4	*Rubus vestitus	60	+	Blechnum nudum	60	+
Gonocarpus tetragynus	80	+	Cnaphalium involucreatum	60	+	Empodisma minus	60	+
Cleichenia dicarpa	80	1	Juncus planifolius	60	+	Eucalyptus ovata	60	2
Hydrocotyle sibthorpioides	80	+	Leptospermum juniperinum	60	1	*Holcus lanatus	60	+
Hypericum japonicum	80	+	Isolepis inundata	60	+	Poa tenera	60	1

NO. OF SITES: 5

STRUCTURE: Low open-woodland to Closed Scrub

DISTRIBUTION: Mainly in the foothills of the Strzelecki Ranges between Yallourn and Narracan, with a single occurrence north of Mt. Tanjil.

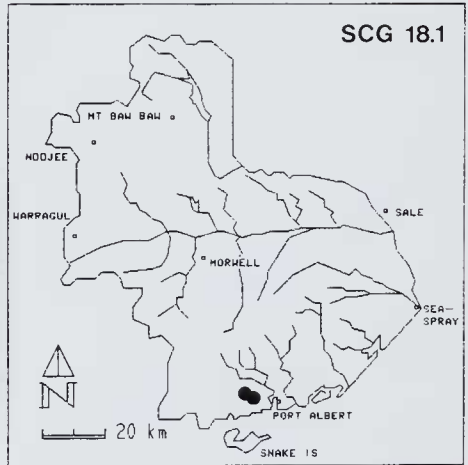
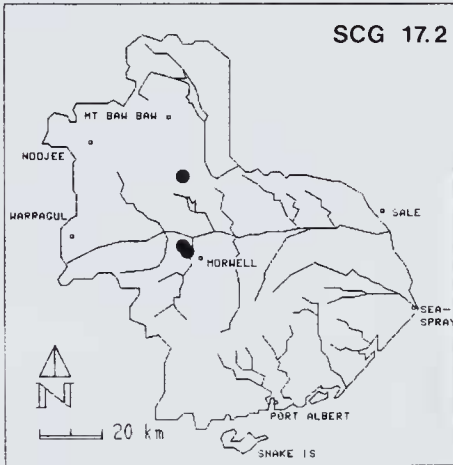
ENVIRONMENT: Shallow and slow-running streams.

ALTITUDE: Mean = 122m, Highest = 220m, Lowest = 60m

MEAN FLORISTIC RICHNESS: 35 species per site

MEAN WEED COMPOSITION: 17% of species, 9% of cover

NOTES: SCG 17.2 is structurally similar to SCG 16.3, but *Melaleuca squarrosa* replaces *M. ericifolia* as the dominant species. The sandy, waterlogged soils support a wide variety of sedges.



UNCLASSIFIED : SUB-COMMUNITY SCG 18.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
Melaleuca squarrosa	100	5	Sprengelia incarnata	66	2	Selaginella uliginosa	66	2
Leptospermum juniperinum	100	3	Leptocarpus tenax	66	2			

NO. OF SITES: 3

STRUCTURE: Closed-heath

DISTRIBUTION: Gellion's Run

ENVIRONMENT: Damp depressions of near-coastal plains.

ALTITUDE: Mean = 0m, Highest = 0m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 7 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: There are too few representatives of this vegetation to adequately classify it in this survey. However its floristic composition and environment suggest that it may be a species-poor version of Community 14 (Coastal Heath).

MANGROVE : SUB-COMMUNITY SCG 19.1

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Avicennia marina</i>	100	5						

NO. OF SITES: 2 STRUCTURE: Closed-heath to Closed-scrub

DISTRIBUTION: The coast west of Port Albert.

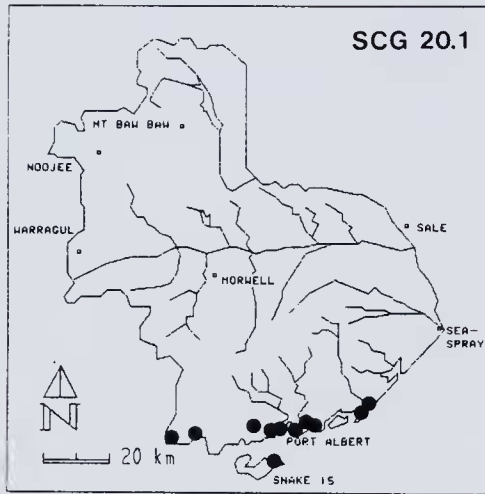
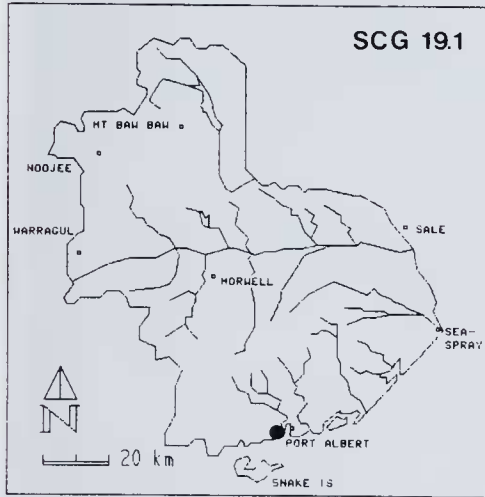
ENVIRONMENT: Coastal mudflats subject to regular tidal inundation. On the extreme seaward edge of the terrestrial vegetation.

ALTITUDE: Mean = 0m, Highest = 0m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 1 species per site

MEAN WEED COMPOSITION: 0% of species, 0% of cover

NOTES: The mangrove vegetation is represented by only two sites in this study but it occupies about 30 to 40% of the coastline of Corner Inlet. It always grows in single species stands and forms what appears to be a buffer zone between the sea and the Salt Marsh (Community 20).

**SALT MARSH : SUB-COMMUNITY SCG 20.1**

CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A	CHARACTER SPECIES	%FREQ	C/A
<i>Sarcocornia quinqueflora</i>	90	3	<i>Distichlis distichophylla</i>	57	2	<i>Disphyma clavellatum</i>	52	1

NO. OF SITES: 21 STRUCTURE: Open-heath to Closed-herbfield

DISTRIBUTION: Scattered along the mainland and island coasts.

ENVIRONMENT: Mudflats subject to tidal inundation.

ALTITUDE: Mean = 0m, Highest = 1m, Lowest = 0m

MEAN FLORISTIC RICHNESS: 9 species per site

MEAN WEED COMPOSITION: 5% of species, 3% of cover

NOTES: The salt marsh of Corner Inlet will often cover extensive tracts of mudflats (e.g. Margaret Is.) but it is not as floristically rich and varied as the salt marsh of Western Port (see Bridgewater and Hughes 1974). It does, however, represent one of the largest areas of salt marsh in Southern Australia.

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